J. COLMAN, Editor and Publisher, Chesnut street, St. Louis, Mo.
H. P. BYRAM, Traveling Editor.
A. GUNTER, Publisher, 99 Third street, Louisville, Ky.

. XII. JANUARY, 1860. NO. 1.

INFLUENCE OF AGRICULTURAL LITERATURE.

y useful profession in an enlightened nity, is expected to have its literature. one ought to have it. A nation's litera- ould be the exact expression in letters of life and character. The literature of a tion is largely imaginative; that of an ned nation is real, exact—the written e nation. Poetry prevails among peo- have not yet realized the highest life to them—among half developed people earlier ages of nations, when the imagina- s vigorous, and not corrected by exact ice and true mechanism. Hyperboles and ld figures of speech prevail in the literature f such people. Exact and polished literature, prevails among truly enlightened people, who weigh life in the scales of science, and write it into books exactly as it is. America has had its poetic period; its imaginative youth, when the pen run riot among the tropes and figures of lawless fancy. It has now come to a soberer period of its existence, when real life begins to go into letters; when stories are not fancy sketches like the "Arabian Nights" and "Sinbad the Sailor," but portraitures of real life; when books are written about the real things that most intimately concern everybody's daily life; such as are coming now daily from the American press. The more enlightened a nation is, the more practical will be its literature. The time is not far distant when everything, from the tunneling a mountain or laying a railroad, to the cooking of potatoes, will be written in exact scientific detail, by the pens of "ready writers." An intense, practical quality of mind always accompanies the highest degrees of enlighten ment. Just in proportion as a nation becomes enlightened, will its literature become practical. Every profession, therefore, must have its literature, or fall below the range of enlightened pursuits. Every profession that has not a literature, will lose its hold upon enlightened respect. In this regard, Agriculture is rising. Its books are multiplying. Its writers are fast leaving the field of poetic and philosophic speculation, and entering upon that of scientific and practical detail. And the signs are that farming and gardening life, will soon be put into books, precisely as it exists in the most advanced quarters of the profession.

Perhaps no calling in life has furnished so much materiai for the literature of the world as the agricultural. The ancient pastoral poems drew nearly all their material from the lives of the shepherds, and vine-growers and gardeners of their time. The sowing and harvest, the germinating and cultivating, the training and ripening, which constitute so much of the husbandman's life, have entered so widely into all literature, as to give it more words and fine forms of expression, than are drawn from all other sources. The Bible, so full of rich literary worth, is fuller of agricultural words and phrases, than the firmament is of stars. The teachings of Christ, which, in exact statement, and clear and forcible portrayal of truth and duty, have no parallel, abound in illustrations drawn from the husbandry of his time. Indeed, if we were to strike out from our literature all that has been culled from the rural life of men, we should have no literature left. It would be its complete destruction. So largely has agriculture influenced the literature of the world in times past. And yet, agriculture has never,

until lately, had a literature peculiarly its own. If without a literature, it has entered into the worlds' best life so largely, what will it do with it?

The literature of any profession is its best means of improvement. It has almost a creative power. It imbues it with life, with energy, and almost with existence. The legal, medical and literary professions feed on their literatures. Their books make them. An unread lawyer has no cases on the docket; an unread doctor, no patients. Literature is the tool with which they ply their mental trades. So will it be with the farmer. Once an unread farmer could plow, and sow and reap; but the day of the ignoramus is about passed. Plowing is now another thing. It has a scientific aspect. It means more than it once did; and he who knows not its full meaning, will fall into the shade of his more intelligent neighbors. Quackery in farming will fall into as general and as deserved disrepute as quackery in medicine. The age of guesswork is passing away; the age of science is taking its place. Every calling that cannot sustain a literature, will become menial, and be called vulgar. A mighty change is coming over the world, especially in America. What would do very well once, will not do now. Once an uneducated man could get along very well; now, a fair education has become a necessity for everybody who craves respectability. Intelligence is the demand which every community now makes on all who claim the peerage of the respectable. And intelligence is necessary to run with success the race of life. Once a smart scrub horse did very well as a racer; but now the best blood only is admitted to the track. And what is true of individuals, is true of professions. Professions must be intelligent to hold the respect of the community. The Agricultural profession must stand on its merits; not on its usefulness, but on its intelligence and power—on its intellectual stamina. Mind is the measure of the man; so it is to be of the profession. Literature is the lever of the mind with which the world is moved. Where there is no literature, there is no lever, and no moving power.

Agriculture, therefore, must have its literature, or accept social abasement. But it has a literature already. It has books, magazines, papers, not inferior in literary merit to those of other professions. And this class of books is fast increasing; and the class of readers who hail with pleasure and read with profit such books, is increasing with as great a ratio. Already the best men of the nation, senators, judges governors, teachers, professional men, litera men, read the literature of agriculture. man but now esteems it an honor to add share of intelligence to the common fu agricultural wisdom, in an address at an cultural fair.

The very best mind of the nation is be interested in, and electrified by the agricultural literature. It will soon b any literary man's reputation not to to address an agricultural meeting an agricultural book. Such is the g fluence of agricultural literature alr every educated man feels himself defici is not posted on its most important facts cultural Chemistry is already taking it in the halls of learning. Agricultural c and chairs are already an institution. of the sciences are closely allied with ag tural interests. All the leading journalists it to their interest to have an agricultural partment in their papers. Even the relig papers have their rural page. Agricult editorship is getting to be an important off American journalism. To provide literatu the farmers is a great consideration amon lishers. All this is the literary devel of our age—almost wholly of the last twe years. To what does it point? Most cle a grand future for agricultural literature; necessity which the times are laying upon farmer to read; to draw much of his life books; to make of his profession a "learn profession" in an important sense. The farm er who does not read will cease to exist as a respectable farmer. In twenty-five years more a literary taste will have sprung up among American agriculturists, to which all literary men will cater; a taste which will not only make a literature to meet its wants, but which will exert an influence upon the whole range of literary pursuits in our country. Agriculture is working its way to an honorable position in American society, and when it gets its true place it will command an influence which nobody will have the hardihood to attempt to resist.

But in the working out of this future, the farmer has his own work to do, his own profession to honor. He must become a reader; must study books as well as stock and corn; must quicken the intelligence of his family with the best literature of his profession; must adorn his neighborhood with a home from which the noblest influences shall go out to improve and dignify society. He must sustain his own literature, befriend his own publishers, extend the circulation of his own papers, build and support his own schools,

enter with spirit into all agricultural improvements in literature, in social life, in farming, in stock, in fruit, in implements, in everything that pertains to the interests of rural society. The farmer must not play the laggard in the great improvements that relate to him and his profession. On him and his profession depend in no small degree the future usefulness and honor of his country. That country has nothing to which it now looks with more confidence than Agricultural literature. Especially is this great West to be molded much by this influence. The farmers' papers must do and will do a work second to none save that done by the Christian religion.

Farmers wake up to the interests of yourselves, your families and your profession.—Spread in every mind of your rural district the influences of your literature. Let no family be without your best paper and your best books. *

ADULTERATION OF FOOD AND MEDICINE.

It is a fact well known to many observing persons at the present day, that there is no article required in civilized life, whether it be food, clothing, medicine or liquor, that is in any way susceptible of adulteration, that persons are not found unprincipled enough to adulterate it—indeed it is almost impossible to find many of these articles that have not been largely adulterated. In the practice of these gigantic frauds every article that can be most advantageously employed, whether harmless in itself, or partaking of the most deadly poison, is employed to gratify the cupidity and avarice of man. These frauds have now become so common and so extensive in the simple articles of diet and medicine as to rob mankind of more than half of their allotted period of existence. And while this wholesale murder is carried on, in almost every department of trade and manufacture, there are no laws to punish the offenders; or if any of the States have enacted such laws they remain a dead letter upon their statute books.

Not long since we read the report of the inspector appointed by the authorities of the city of Cincinnati, Ohio, for the inspection and analysis of the liquors for sale in that city, which disclosed the fact, that out of the thousands of hogsheads of liquors, of the various kinds then offered to the public, and daily sold in that populous city, there was scarcely a gallon to be found that had not been adulterated, and many of them made up of the most poisonous compounds, containing not a particle of the genuine articles under which names they were sold.

To show the extent to which this nefarious business is carried on in the central metropolis of "the land of steady habits," we make the following extracts from the report of Dr. C. J. Carney, chairman of the committee appointed at the eighth annual meeting of the American Pharmaceutical Association, held at Boston, to examine articles of food and medicine for home consumption, and to detect adulterations, who presented a most fearful list, a portion of which we copy:

Colored Confectionery—adulterated with emerald or Scheele's green, arsenite of copper. Beer—with cocculus indicus and nux vomica. Pickles and Bottled Fruits—with virdigris and sulphate of copper. Custard Powder—with chromate of lead. Tea and Snuff—with the same. Cayenne and Curry Powder—with red oxide lead. Sugar Confectionery—with gamboge, orpiment, or sulphuret of arsenic and chloride of copper. Flour and Bread—with hydrated sulphate of lime, plaster of Paris and alum. Vinegar—with sulphuric acid. Sugar—with sand and plaster of Paris. Arrow Root—with ground rice. Chocolate—with rice flour, potato starch, gum tragacanth, cinnabar, balsam of Peru, red oxide of mercury, red lead, carbonate of lime, and the red ochres to bring up the color. Mustard—with ground tumeric, to give it a brilliant color. Butter—with potato starch, mutton tallow, carbonate and sugar of lead. Tartaric acid—with cream of tartar, acid sulphate of potassa, and with lime. Starch—with carbonate and sulphate of lime or alabaster; the more common fraud is, however, to saturate it with moisture. Beeswax—with rosin, Burgundy pitch, earthy matter, flour of sulphur, starch and amylaceous substances, tallow, stearic acid, yellow ochre, calcined bones and sawdust. Manna—with glucose, or starch sugar and starch. The large flake manna is sometimes made from a mixture, consisting of a little manna, flour, honey and purgative powder; these are boiled together to a syrupy consistence, and then molded in the form of "flakes;" common "sorts manna" have been converted into "flake" by being boiled in water, clarified with charcoal and molded into proper form.

A number of specimens were then presented and the committee remarked upon them as follows:

Cream of tartar is very largely adulterated. Some of the articles used for the purpose are in one sense harmless; but many of them are decidedly pernicious, and all of them are to be condemned, because sold to deceive the commu-

nity and enrich the adulterer. It is adulterated with tartarate of lime, chalk, finely powdered white marble, sulphate of lime, sand, nitrate of potassa, alum, sulphate of soda and potassa, chloride of potassium and starch. The easiest way to detect the adulteration with starch or farinaceous substances is by testing a cold solution of cream of tartar with a solution of iodine. The characteristic "blue iodine of starch" will at once be apparent. If we treat the cream of tartar with boiling water, we dissolve all soluble substances, leaving behind the tartarate of lime, quartz, clay and sulphate of lime and other insoluble impurities. As cream of tartar is used very extensively, its adulteration should deter persons from using it in cooking.

Some ground coffee was found to contain 60 pounds of common peas, 20 pounds of chicory and 20 pounds of coffee in every 100 pounds, which was labelled "Fine Old Java." A member of the committee had seen in a wood turner's shop in Boston more than a barrel of East India rhubarb which was being turned down into "true Turkey." This rhubarb was sold for genuine and real Turkey rhubarb.

Dr. Jackson, of Boston, made some excellent remarks at this convention. He said that since the passage of the foolish law with regard to examination at the custom-house, no regular analyses have existed, and at the custom-house they are impossible.

The committee withhold the names of the parties guilty of this practice, but it was recommended that the association should take some action in reference to the subject.

From the fearful extent to which these fraudulent and murderous practices are carried on in every article of human consumption, it is the duty of the State and the United States governments to adopt such measures as will check these adulterations and punish the guilty parties. The penalty in all cases of clear conviction should be of the severest character, from which there should be no escape. If the practice amounted only to the robbery of dollars and cents, it would be a matter of comparatively less consequence: but when the life and health of millions of persons are endangered daily, it becomes the duty of those in authority to exert their utmost powers to check it and to bring the guilty parties to punishment.

How does blowing hot food make it cool? It causes the air which has been heated by food to change more rapidly, and give place to the fresh cool air.

Liquefaction of Quartz and Flint in Water—New Building Material.

There seems to be no limit to the discoveries of the age and the development of science. As the demands of civilized society increase, science unfolds the way to meet them. One of the latest and most wonderful discoveries of this wonderful era in the history of mankind is a process by which the rocks may be dissolved and rendered perfectly liquid at the rate of several tons a day in a single apparatus, and at a cheap rate. Not only will this discovery prove invaluable in separating gold from quartz rock, but the liquid quartz may be used as a cement for molding sand or stone into any desired form for building materials of the most beautiful and enduring texture.

It is a fact well known to geologists that in certain portions of the globe there are springs that by some peculiar phenomena of nature are capable of dissolving flint and quartz, which are subsequently reconverted into rock. It is probably owing to the operation of these natural laws that the wonderful discovery has been made of employing art in facilitating this process, and of rendering it of infinite value in various ways to the world at large. We have frequently seen allusions to the discovery of a new process of liquifying rocks, but until recently we had no knowledge of the extent to which the art could be carried, nor of the various uses to which it could be applied. In a late number of the *Scientific American* some detailed account of the process is given and of the uses to which the manufactured material may be employed. In order to give a brief exposition of this important discovery we copy an extract from the article by Professor Fleury. He says: "I was honored with an invitation to visit the works of Professor Hardinge, at One Hundred and Fourth Street and Broadway, New York, near his residence at Woodlawn, and *saw him dissolve one ton of quartz at a time*, in a single digester, containing about one thousand gallons of water. The digester holds *over three thousand gallons*, and is capable of discharging six thousand gallons of "liquid flint" every day. The liquid quartz which I saw dissolved, is chemically pure, and the solution *perfect;* the liquid forming a *thick pellicle* when heated and exposed to the air, although it may be preserved any length of time in close reservoirs in the same liquid state. My attention was drawn towards Professor Hardinge about two years ago, by an article on this subject, occupying over four columns of the *New York Tribune*, and signed by a number of eminent Eu-

ropean chemists. Professor Hardinge has been for many years laboring to perfect his vast purposes, and I hereby stake my reputation, as a man claiming some scientific knowledge, to judge of the fact, that he is now ready to *build a city of the most durable as well as the most beautiful stone which it is possible for the human mind to conceive;* walls of variegated conglomerate, lined with colored porcelain (painted in fresco), fire-proof roofs, *molded* statuary of the richest and hardest kind, with the aforesaid liquid flint *as a base.* Since the above-mentioned publication, and my consequent personal acquaintance with Professor Hardinge, he has been industriously engaged in overcoming the great difficulty of separating gold and silver from *quartzose pyrites.* His success in this department will soon be known in the commercial world. Having taken pains to keep fully posted on all that has been discovered and practically done in this department in France, England and Germany, as well as in this country, I know that never before has such a perfect solution of silica on such a large scale been presented to the scientific and industrial world; and I can vouch for the fact that Mr. Hardinge has exhibited *liquid* flint with silica in far greater excess over any *solvent base* than has ever before been achieved by the ablest chemists, either in Europe or in this country. This fact has been tested by several European celebrities, whose certificates I have seen, given by them after examining samples of the article, which is now exhibited in such large quantities."

If what is claimed for this discovery be fully realized, it will create a revolution in the mechanical world, for it is hardly possible to conceive of the numerous uses to which it may be applied, not only in separating the precious metals from the rock with which they are combined, and in forming the more ponderous materials for the construction of buildings in cities, but it may be employed in thousands of ways in the formation of various useful and ornamental articles. Like India rubber it is hardly possible to enumerate the many uses to which the art of the American people can employ it. We wait with some interest to see this discovery come into general use. What further improvements are necessary, or how long it will be before the public are to reap the fruits of the discovery, we are unable to determine.

Why does water melt salt? Because very minute particles of water insinuate themselves into the pores of the salt by capillary attraction, and force the crystals apart from each other.

THE UTILITY OF HIGH PREMIUMS JUDICIOUSLY BESTOWED.

The St. Louis Agricultural and Mechanical Association has taken the lead of all others in the United States in the liberal amount of the premiums it offers on improved stock, farm crops, and valuable inventions. The wisdom of this policy is manifest by the unparalleled success of the Association, to say nothing of the incidental advantages to various departments of trade and travel connected with our enterprising community, besides the infinitely greater benefits that will flow to the great mass of the farmers and mechanics, from the spirit of emulation which will necessarily flow from such grand displays of improved animals, field crops and new labor-saving inventions. These splendid premiums undoubtedly brought together thousands of people as well as some of the best animals and inventions, adding vastly to the great display that otherwise would not have been called out. These premiums add to the good name and fame of the Association throughout the entire Union. And here we would add a word upon the important necessity of the strictest regard on the part of the officers of this and all similar associations in selecting judges in the various departments of the exhibition, of the best judgement and the highest integrity—men above the slightest suspicion of *party influence, or local partiality.*

The Illinois Rail Road Company has also displayed its wisdom in offering liberal premiums for the best steam plowing, and land draining machines. That this Company should step aside from what some might deem its legitimate sphere and offer such handsome prizes for the best machines for such purposes has been a matter of some wonder on the part of those not fully acquainted with the great landed interests of this Company, and with the vast benefits that must necessarily follow the successful introduction of these great labor-saving machines, to the Company and to the country at large. But besides these advantages we doubt whether the great Central Rail Road Company has not found its liberality bestowed in this line a good investment in the immediate returns that have flowed to the road in the vast number of passengers it was called upon to convey to the fairs, besides the gain that will result from the land sales by the gathering of such a multitude of people. Probably not less than fifty thousand people were called together at the State Fair to witness the wonderful performance of the steam plows; and the various published accounts of

these have undoubtedly been read by five million more who caught the idea of the advantages that are to flow from this one great stride in the progress of invention applied to the powerful interests of Agriculture.

In England, where labor is comparatively a matter of secondary importance, steam plows far inferior to those of American invention, which are still in their infancy, are coming into general use. How much more valuable they will prove in the United States where the price of labor is three times as great as in that country.

We hope then, that the success that has attended the offer of these liberal premiums will prove of sufficient encouragement for their continuance, and for their adoption by other societies in the United States.

SCHOOL OF DESIGN FOR WOMEN.

A few years ago some benevolent ladies of the city of New York, in view of the privation and suffering to which many women were driven, as mere drudges in servile occupations, and for the merest pittance, made an effort to open a new pathway for the elevation and advancement of women of intellect and taste, who were dependant on their own exertions for a livelihood. They proposed the adoption of some useful, and at the same time congenial employment, and established what is called the "School of Design." This school was first opened in a small room on the corner of Broome street and Broadway. The art of designing and engraving on wood was hit upon as affording a pleasant and healthful, and at the same time profitable employment for any number that might choose to adopt it. With this object in view excellent teachers were procured; and from the small number that first assembled, the school has continued to increase and its numbers to multiply until now the enterprize promises to be one of the grandest and best that has ever been proposed by the friends of ambitious but needy women. As more room was required, a portion of the large Bible House, in Astor Place, was occupied by the school; but more recently, the noble-hearted and benevolent Peter Cooper, seeing the vast benefits resulting from this enterprize, set apart a suite of rooms in the building erected by his liberality and known as the "Cooper Institute Building." These rooms extend through one entire wing of this large edifice.

The year is divided into four terms of ten weeks each, with an annual vacation in summer, and the usual intermission at the winter holidays.

During the last session the school has been remodeled upon an improved basis, in accordance with the desire of Mr. Cooper, and it will be incorporated into the "Union" as an organic part of the Institute—the trustees of the Cooper Union assuming the responsibility of its permanent existence and support. The lady managers, however, will continue in the school under the general rules and regulations, as the trustees of the "Union" may from time to time adopt.

Pupils not under twelve years of age are received on producing satisfactory evidence of good character and fitness in other respects. No fees are charged for the instruction of the pupils, and they are entitled to all their earnings, but are required to furnish their own tools and the blocks for engraving. In this department, during the usual hours of the school, the average earnings of each is about one dollar per day. The numerous book and periodical illustrations now required by publishers, and labels and devices for the various trades and manufactures, afford employment for an indefinite number of persons in this delightful art. Many of the illustrations which appear in the agricultural periodicals of the day are the work of these female hands. It is in every way an honorable and pleasant labor, and always remunerative to intelligent industry. Many pupils of the school have qualified themselves for the successful practice of wood engraving, and there is ample assurance of sufficient occupation for all who may acquire the necessary knowledge to practice it well. Numerous accomplished teachers have been educated in the school, and have gone out to occupy useful and profitable positions in various parts of the country, much to their own interest and to the benefit of others. The rooms are open daily at all hours, and visitors are freely admitted. On a recent visit to New York we spent a very pleasant hour among the pupils in this school.

WHAT CONSTITUTES A GOOD FARMER?—G. D. Harmon, of Georgia, thus asks and answers this important question, in a late number of the *Cotton Planter:*

If the Disposer of human events should permit this world to stand a thousand years longer, the time will surely come when every man who tills the earth will be compelled to be a good farmer or starve to death. This is a strong expression, but as true as it is strong. Old fogyism may continue to denounce those who labor to improve the agriculture of the South; but the time will come when their posterity will see their stupid folly, and be forced to improve the soil which their ancestors butchered. The day has already come with England, France,

Germany and Ireland, when agriculturists are compelled from true necessity to study their profession, and improve their systems of farming economy, to an extent limited only by their power to do so. If they were to pursue the course that the planters of the South are now pursuing, in less than twenty years they would either starve to death, or be forced to leave "their own, their native land."

CULTURE OF TOBACCO.

Tobacco is one of those crops the cultivation of which we do not care particularly to encourage; but, while farmers find it profitable, they will continue to grow it. If, then, we can offer any suggestions in connection with its culture, whereby the fertility of the soil may be protected from that waste that has ever attended its growth under the system pursued by its early cultivators, we deem it proper to do so. The course of cultivation adopted in the tobacco-growing States, and, indeed, in all the older States, was without much regard to any system of rotation. Tobacco, corn and other staple crops were continued each, upon the same land, year after year, as long as they would yield a return; and then, the land was turned out, and other fields subjected to the same ruinous process. The opinion became common, that tobacco could only be grown upon new land, and the idea of saving and applying manure to the land, or of employing any means to prevent its rapid exhaustion, never entered the minds of the early planters.

The culture of tobacco is becoming an important crop in Connecticut, New York, and other Northern States, and the farmers in those States find no difficulty in growing heavy crops upon old lands that have been under cultivation from fifty to one hundred years—but in doing this, they economize their manure, and adopt such a course of rotation as is most consistent with the improvement of the soil. With other manures, guano is becoming an important article in the cultivation of tobacco. Since the soil of Maryland and Virginia has become so much exhausted, by the mode of cultivation so long employed there, the more intelligent farmers of those States have been convinced of their error, and have adopted a greatly improved system of cultivation; and lands that were considered almost worthless, have, under this new mode of management, been made to yield as heavy crops as when they were first subjected to the plow. An instance of this may be seen upon the farm of Mr. E. W. Friend, of Dinwiddie county, Virginia. Mr. Friend has detailed his mode of management and system of rotation, in a prize essay, to the Union Agricultural Society of that State, the substance of which we find in the *Southern Homestead*. And although the situation of our Western farmers is widely different from those of Virginia, yet the system there adopted, may afford valuable hints to them; as it may be modified so as to be adapted to any locality. For instance, as a substitute for the guano, let the natural resources of the farm be employed for the increase of the manure heap; and let this be judiciously applied; and where peas do not prosper, let clover and other green crops be grown in their stead. The system referred to is as follows:

Taking a farm supposed to be in the ordinary condition of the lands of the country, he recommends that it be divided into six fields, as nearly equal in size as convenience will permit—the size of the farm and the number of laborers, bear a definite proportion to each other. It is generally admitted, that with the requisite attention to other crops, each hand can cultivate 7,000 hills of tobacco. Supposing, then, the number of laborers to be five, there will be 35,000 hills of tobacco; which will be equivalent to 8½ acres. Now, as one-half of a field is to be put in tobacco every year, this would give 17 acres as the size of the fields; or 100 acres of arable land as the proper size of the farm to be worked by five hands. It is true the farmers may, and often do, extend their operations over a wider surface; but it is believed, that the results thus obtained, are not so remunerative as under thorough tillage in a more limited area. The rotation, then, on the six-shift system, is designed to be as follows—the course of culture in a single field being given as an example of the whole:

1st year—Corn. To be manured from the resources of the farm as far as they will go.

2nd year—Oats. Immediately after the removal of the oats, one-half of the field to be sown in peas, with 100 pounds of guano to the acre, on the part designated for tobacco the ensuing year; the vines to be turned under in the fall.

3d year—The half field of peas after oats, which is to be put in tobacco this year, should be thrown up into 3½ feet beds, during winter or early spring, and the furrows half filled with straw or woods litter. If lime or ashes can be obtained, the land should have a dressing of one or the other during the winter; and, just before the plants are large enough for transplanting, an application should be made of one bushel of salt, a bushel of plaster, and 200 pounds of

guano per acre immediately on the beds of litter. The beds are to be reversed, and the plants set out, as soon as there is a season. By confining the litter to the furrows, the land will not be so porous, and less obstruction will be offered to the hoe. Salt is intended to keep the cut-worms out of the straw, and may have some influence in retaining moisture in the soil. The other half of the tobacco-field is to be sowed in peas, from the middle of May, till the first of June, with 100 pounds of guano per acre, preparatory to seeding the whole field in wheat in the fall.

4th year—WHEAT. With 100 pounds of guano per acre.

5th year—PEAS. The land should have been plowed the preceding winter; and is to be sowed in peas by or before the first of June, and 100 pounds of guano applied to the acre. To get the full value of the pea-crop, the seeding should not be deferred longer than the time designated. The plant comes perfectly to maturity, and the vines are prolific of fruit; furnishing the best food for hogs intended to be fattened, besides yielding an abundance of seed for future use.

6th year—WHEAT. After the pea-fallow. If practicable, as soon as possible after the wheat is harvested, the field should be laid down in peas, with 100 pounds of guano to the acre for the benefit of the corn-crop the next, or the 7th year, which is the commencement of the second rotation.

It will thus be perceived that peas are regarded as an important, and, indeed, indispensable auxiliary in the cultivation of the soil during the first rotation. The frequent seeding to which it is necessary to have recourse, doubtless involves a considerable amount of labor; but it is labor well bestowed, and is amply repaid in the increased production of the soil. Nor can the same amount of improvement be so cheaply purchased, in the early stages of a rotation on land in moderate condition, by any other means, as by peas and guano. During the second course of rotation, if proper diligence has been used in the accumulation of manure from the resources of the farm, the land will be in a condition to produce clover. But, until this point is attained, whether sooner or later, the peas cannot be dispensed with.

The practical working of this system is as follows:

One field in corn; one in oats; the half of one field in tobacco; two in wheat; and one and a half in clover or peas. The oats and corn, being fed on the premises, may be considered as returning to the soil a large portion of what they have abstracted from it. The area, therefore, occupied by the market crops, is only two and a half fields, or five-twelfths of the whole surface. Mr. Friend says, that *experience* justifies him in stating, that it is a decidedly ameliorating system; and, at the end of the third rotation, the land will have obtained its maximum fertility.

It will be inferred, from what has been said above, that the land upon which Mr. Friend's experiments were made, was in a very exhausted condition when he began this system of improvement; so much so, that clover could not be grown; and hence, peas were substituted, in connection with liberal applications of guano. But our farmers, who are favored with better land, may adopt with advantage so much of the rotation as embraces the staple crops; with such modifications in regard to the peas, guano, &c. as may be required by local circumstances. The system is a judicious one; and no farming can long continue profitable that is not based upon this or some similar rotation. We are glad that the farmers of Old Virginia have discovered the error so long practiced by them; and we hope their improved system will be be adopted by their friends and neighbors, who have worn out their lands, and have been compelled to seek new homes in the Great West.

LOOK OUT FOR THE ROBBER.

In a three-weeks trip we have lately taken among the farmers we have been pained to witness the terrible robberies which are constantly being committed among them. Some farmers are losing, by robberies committed before their eyes, all their present year's profit. And they stand coolly by and see the money taken out of their pockets without an effort to resist. We observed on one farm about $600, in mower, thresher, drill, plows, harrows, wagons, &c. laying out to the robbery of sun and storm, time and decay. And there they are to lay all winter, and spring and summer, too. It is a common thing to see more lost in this way than is gained by hard work. Farmers must love to make money who will see it thus rot in the open weather.

Why has rain water such an unpleasant smell when it is collected in a rain tub or tank? Because it is impregnated with decomposed organic matters washed from the roofs, trees, or the cask in which it is collected.

[Written for the Valley Farmer.]

TO THE MANAGERS OF OUR GREAT FAIRS.

EDS. VALLEY FARMER:—The two mammoth Fairs (United States and St. Louis) of 1859, not only demonstrated the fact that these Fairs were patronized far beyond the expectations of managers—that such fairs have become fixed, self-sustaining institutions—but *that there is room for improvement in the programme of managers*, notwithstanding those abovenamed were believed to be the best yet put in practice. It is evident to every observing spectator, that the splendid exhibitions of "*blooded stock*"—horses, cattle, sheep and swine—is enough to allure the miser from his heaps of hoarded gold, the debauchee from the flowing, sparkling wine, and the honest laborer from his needy toil. It is not to be wondered at, then, that the excitement should run high on the show of fine stock; nor that hundreds of men, who would make the very best judges in the *agricultural, horticultural* and *mechanical departments* decline to serve, because attention to the duties as judges would deprive them of the opportunity to see the sights in the "ring." The result is, a vast amount of labor is forced upon a few committees, especially in the mechanical department; and a portion of the labors must necessarily be done in a hurried manner.

The verdict of a jury of our great fairs, on the comparative merits of implements and machinery, should only be rendered after a *careful and intelligent investigation, permitting competitors to point out defects*, while the exhibitors explain in detail all the merits.

The verdict of such a jury would not only be valuable to the successful exhibitor, but would be a reliable guide to hundreds and thousands less experienced purchasers. It will be almost impossible to attain such a result without a change in the programme. *Divide the time each day.* Devote the *morning* to the *inanimate departments*, and the afternoon to live stock. Increase the number of juries, and men who desire to participate in the pleasure and profit of such exhibitions will generally be found public spirited enough to undergo any reasonable amount of labor, if you do not tax their good nature too much. The mechanical interest in the North-West has become "one of the great estates of the realm." It is to the genius, skill and industry represented by that interest, that we are to look for the accelerated march of civilization towards the frozen ocean, the Pacific coast, and the rich country of the Aztecs. All honor, then, to their genius, labor and skill. Let no efforts be wanting to secure their attendance, with a large exhibition of their best productions. The farmer, too, has his eyes turned in that direction. Although he looks with admiration upon the animals that are exhibited for the $1000 prizes, still his judgment admonishes him that his interest requires a careful and thorough examination of the mechanical department. The exhibitors of machinery and implements, like the rest of mankind, have a desire to see the novelties and attractions of the fair. Their task is onerous indeed. To repeat for a hundred or more times in a day, for five or six days in succession, the working qualities and comparative merits of their implements or machines; and if they happen to leave for a few moment's rest, refreshment or amusement, the "committee" may arrive, and finding no one to represent the machine, "pass" it altogether as they are in a "*hurry.*" The mechanics call for a fair division of the time. It is far better to have the two interests jointly represented at the fairs now established, than it would be to have a great North-Western Mechanical Institution, holding its fairs successively in St. Louis, Louisville and Cincinnati. A word to the wise is sufficient.

PROGRESS.

[Written for the Valley Farmer.]

"Old Firkin's" Method of Cultivating the Irish Potato.

EDITORS VALLEY FARMER:—Aside from bread, there is, perhaps, no article of vegetable food that enters so largely into our diet as potatoes. Having been a resident of the famous city of St. Louis for two several years, and being almost a yearly visitor there, I know from experience that very many of the potatoes consumed in your good city are hardly fit to be eaten. I will take it for granted, therefore, that a few remarks on the subject of raising good ones may not be uninteresting to most of your readers.

The best ground to raise potatoes on is new breaking, partly because it is generally free from weeds, and partly because it is dryer. A sandy loam, where it may be had, is preferable to a stiff clay. No one of course would think of manuring new ground. I would never plant potatoes the same year that my land was manured, if old ground should be chosen. I would consider land which had been pastured, or meadow, the same as new. Plant in rows one way, potatoes, about twenty inches apart in the row.

I have for years planted my potatoes at the ends of my corn, because a horse may turn on the potato ground, and if accidentally he steps on a vine, it is of no consequence; whereas, if he steps on the corn, or when the corn is larger breaks it off, it is a dead loss, and the ends of your corn rows will look ragged and unfarmerlike, unless you should have grass in your turn rows. It is also a good plan to plant a few rows of potatoes next to division fences, or the public highway; for by so doing you remove the temptation from the cattle or horses that may pasture thereon. In going and coming to my work (while tending the corn), I always plow down one row of potatoes and back in another, thus losing no time, while I am all the while cultivating my potatoes; and I never saw a greater benefit from frequent stirring of the ground than this last season, which, with us, was one of extreme and protracted drought.

The question whether much or little seed is best, may, in part, be settled by the following table of experiments, conducted in England, by J. H. Knight, President of the London Gardeners' Society, in 1828, and published in the *Gardener's Magazine*. Mr. Knight planted in a like soil, four pieces of potatoes, each with two eyes or sprouts; four pieces, each with five or six

eyes; four small potatoes, and also four large potatoes, with the following results: The first four pieces yielded eight pounds, the next four, eleven pounds, the four small potatoes, fifteen pounds, and the large potatoes sixteen pounds. Other experiments were made with a similar or like result. I would say that my own experience teaches, that large-sized potatoes may be grown from pieces, or even parings, if taken deep; but the crop will not be so abundant as when good-sized, whole potatoes are used for seed.

We have had a delightful Fall, and with the exception of two days, nothing to remind us of Winter. More rye has been sown than usual in Ogle county. Corn may be said to be a failure, although a few fields yielded perhaps thirty bushels per acre. OLD FIRKIN.

Oregon, Ogle County, Ill. Nov. 30th, 1859.

[Written for the Valley Farmer.]

Seed Corn---Butt Ends of Ears Give Earliest and Best.

EDITORS VALLEY FARMER:—In the *Farmer* for November it is stated that Wm. L. Morgan, of Warren county, Ind. avers that seed from the large end of the ear of corn, will not only ripen more evenly, but earlier than that from kernels taken from the small end, by the very considerable period of three weeks; and as we have, within a year or two, repeatedly seen similar statements from corn growers in several other States, there seems to be some grounds for concluding that the alleged advantage arising from the use of the large end kernels is not a mere chimera, but rests upon a basis of reason and fact. If it be really true that the period of ripening can be hastened, by even ten or twelve days, the advantage that must arise to the country would be greater even than a successful preventative of the wheat midge; for while the visitations of this devastator may be merely temporary, there is no present reason to infer that the devastations yearly inflicted on our corn, by early fall frosts, will be otherwise than generally permanent over most of the Northern and Middle States. Hence there can be no doubt but the subject is of much importance, especially to that somewhat skeptical class who glory in the cognomen of "practical men." Not that the farmers are more skeptical than is often necessary, but having been so often plied with "oily gammon," they are quite right in demanding "the reason why."

It need not be stated that the butt end of the ear is generally, if not invariably, the largest; but if size is a measure of power, why should it not be so vitally as well as mechanically? And if so, it cannot, in this matter, be without its utility and purpose. All seed being naturally intended to grow, if need be, the more perfect the seed the better the character of its resulting growth will be. The butt end kernels being larger in the mean average—being gradated in size—by about one-third than those of the small or top end, should, therefore, afford a greater degree of nutrient strength, consisting in their larger contents of starch, oil, gum, sugar, etc. to nourish and sustain a larger and more rapid development of the grain, when it has begun to vegetate. If, then, the butt end kernels give an average bulk of about a third more of nutritive substance than can be obtained from the top end of the ear, of which there appears no doubt? In using the larger half of the ear for seed we apparently have the natural and proper proportion of seed-food ready for and capable of transformation into rudimentary root and stem of larger dimensions, by twenty to thirty per cent. than could rationally be anticipated from the use of seed from the smaller end of the ear.

According to the general principle of "like cause like consequence," this larger seed—accessible to every corn growth—seems thus naturally constituted to sustain a larger than average growth; the natural substantial means to that end, in so far as the purpose of germinal and underground growth, depending on the parent seed and sustained by it, is involved. And thus, to our mind, it is clear that the larger kernals will naturally sustain and generally insure a considerably greater drain and equal excess of vigorous growth over small end seed, of any given ear or variety. Why not?

As to the cause of difference in size of kernels on either end of ear of corn, no better explanation at present offers than that based on the principle of "first come first served." The butt end being nearest the sources of supply, and first meeting the sap in its earliest ascent in spring, gets the first supply; and its seeds being first formed, a greater amount, and probably a longer duration of it also. And that it gets the largest proportion of the sap flow generally, seems pretty evident, alike from its position on the ear, and the greater bulk of the seed itself. But we will not wait with this topic, it being of comparatively little importance how superiority was derived, provided we have it in a form to secure a tangible advantage.

But greater earliness, if that can be attained to anything near the extent alleged, is an object very generally desired and much sought. According to our view those kernels or seeds which ripen first, fully and perfectly, must needs give the earliest crop—other things being equal—when used for seed. And almost every farm-housewife, who has picked "sweet corn," will have noticed many kernels—perhaps a dozen, more or less—not only smaller and tapering off in size, but more milky with mucilage and the least mature, or perhaps scarcely formed, round the extreme end of the ear; at the same time the butt end is "out of the milk," as the phrase runs, and firm under pressure of the nail. These different degrees of consistence in the opposite ends constituting a generally graduated scale as to maturity, consistence, size and bulk, and power of vital force and substance; and the fact of greater size and earlier ripening in butt end seed is known by our own observation, and we dare say that of hundreds of others who have inspected the relative condition of different ears, and of different parts of the same ear, sometimes pretty closely when gathering the earliest and largest for "seed corn." We *all* know that *some ears* ripen many days before others, from the

same kind of seed and the same crop; and the blackbird, as well as any of us, demonstrate their knowledge of the fact that the small and generally up-pointing seeds of the ears are soft and dewy or mucilaginous, frequently a week or thereabouts after the large end seeds are too ripe and hard for them to suck at and destroy. The present year we had abundant evidence that the blackbird did not leave the large end because of an apparent difficulty of access to that part; for they took the entire ear on most of a six-acre field of ours, which had its growth arrested, and for the most part wofully stopped in the milky stage, by the invincible and voracious chintz-bug. It appears, then, that the large end of the ear affords or may supply us with much larger seed; and from analogy and experience both, we should expect more bulky and vigorous growth, according to the size of seed in the first place. And the earlier maturity of this larger seed certainly appears to be well founded and beyond refutation. Take, then, the conjoined qualities of twenty to thirty for greater bulk and its consequent power and vigor, together with its decidedly earlier ripening; and have we not reasonable grounds for concluding that butt end seed will insure earlier and better crops of corn than can be derived from planting this common average seed of the entire ears? We, for one, have confidence enough to believe so, in any event, and we think with reason. The aggregate product of all the States was, in 1850, 600,000,000 of bushels. Taking into account the vast increase since that date, of the extent of corn cultivated in the best districts of the West, of the continent and probably of the globe, there will be about 800,000,000 of bushels, raised in 1860, if it be a fair corn year. But calling it only, as in 1850, and estimating the annual loss by freezing in early autumn, at one-fourth, or 150,000,000 bushels, according to this estimate, the annual loss by corn maturing *too late*, is not less than seventy-five millions of dollars—an interest, value and commodity surely worth saving. Now, if we can hasten the time of maturity by only ten days, it seems a fair inference that only two-thirds of this vast loss, at least, may be prevented. If fifty millions worth of our most valuable products will compensate for the effort what is there to prevent its generally being made and without unnecessary delay. C.

[Written for the Valley Farmer.]

DO YOU TAKE AN AGRICULTURAL PAPER?

Farmer, do you take an Agricultural publication? If you do not, you are *wronging* yourself, and not only yourself, but your neighbor; for is he not governed somewhat by your way of doing things? And you, by eschewing "book-farming" entirely, follow on in the old-fashioned routine, and plant and sow and cultivate your crops, just as your father and his father did; and just as the rules have been handed down from generation to generation, so you persist in doing; although you might, by investing a dollar or two in some good farmers' paper, make five times the money, and do it with one-fifth the labor that you can by following the old beaten track.

The idea of a farmer doing without his farmers' paper in this enlightened age of the world, when the country is filled with good cheap publications, just suited to his wants, is a very pernicious one.

The idea that you have, that all writers on agricultural matters are theoretical, shows how far you are from being posted up on matters and things in general. Take all the matter that is contributed to Agricultural publications in the Union, and I venture the assertion that nine out of ten are from practical, working men, who have tested practically the matters they are thus putting before their fellow workers.

Then, again, you say you have not time to read! What do you do with your long winter evenings, and with your rainy days in summer? You would get ten times as much satisfaction reading your paper, to say nothing about the infinite amount more good it would do you, than you do smoking that little black stump of a pipe, or dozing the precious hours away.

Another one says: "I am not able to follow all the new fangled notions that one gets in the the papers; therefore, I do not want it at all." Pshaw! Do you suppose any man in this broad land is fool enough to do everything that he reads? No one is supposed to subscribe for an Agricultural paper, that has no more wit than that. But here you get a hint, and there you get a hint, on the same principle that you and your neighbors get together, and exchange views with regard to farming and matters in general; and you go ahead, and, may be, improve on a suggestion, and you tell your neighbors, and they reap the benefit with you.

Most sincerely do I wish, that every farmer, and planter and gardener in our beautiful land, could have the reading of at least one good Agricultural paper during the year 1860. I do not believe there is a man in the land, who, after having a good publication for one year, would ever be without one again.

Of course no *man* will plead poverty when such a paper as the *Valley Farmer* can be had a year for the paltry sum of one dollar. Just think! for a bushel or two of corn or potatoes, or two or three chickens, or that old gobbler strutting around in your yard, you can have a social chat with the bright-faced *Farmer* twelve times during the year 1860; and, with a little care in preserving the numbers as you get them, you will, at the end of the year, have a volume of 384 pages of valuable information, for which you would not probably take ten times what it cost you. In conclusion, let me say, if you *don't* take some kind of a farmers' paper, and any body should ask you if you *did*, don't for the honor of the age you live in own up the corn; but, kind of stave off the answer some way or other, and as soon as you get home pull out that old wallet, and send a dollar or two to some publication of the kind you *need*. Give your name and P. O. address in a plain, business-like hand, and then you can hold up your head as high as any one, for you will be a man among men. CHAS. A. FENN.

ICE-HOUSES.

A correspondent in Tennessee wishes instructions for building ice-houses. A few general directions will enable any one to build them, and, as each one must determine for himself whether he will build it ornamental or plain and cheap, we shall mainly lay down the principles to secure the best results, and leave the details to the fancy of the builders. To secure ice for summer, you must secure—

1st. Perfect drainage for the waste water.

2nd. A non-conducting substance of not less than one foot to surround the ice.

3d. Close fitting double doors, secured against the possibility of a current of air passing through or over the ice.

In building an ice-house under, in stiff clay, the main difficulty is to secure a drainage. If an artificial drain is made, it must not be open so as to allow a current of air, otherwise it will cause the ice to melt by allowing the cold air to flow out through it, and thus draw in warm air through any opening that may be in the house. To prevent this fill the drain with finely broken rock, or let it terminate under water. If the soil is porous, no drain is necessary. A house ten feet square is ample for an ordinary family, but so far South as Tennessee, where ice may not be relied on every winter, it would be better to build it sixteen feet in the clear. A good ice-house may be built partly under ground by digging a hole eight feet deep and sixteen feet square, and building a log crib close to the sides and six or eight feet above the surface, and throwing the earth up against the logs, or by lining with slabs or boards. The house should have a floor at the square, and this floor should be covered with sawdust or dry straw, and the ice will keep better if the only entrance is made in this floor. The roof should be whitewashed, and if in the shade so much the better.

To build an ice-house above ground get sills the size you want not less than a foot square, and set studs on each side of the sills; board up closely both inside and out, and fill the space between with charcoal, sawdust or straw, well trodden in, and cover with a floor as in the other case; cover the bottom to the depth of at least a foot with shavings, sawdust, leaves, straw or some other porous non-conductor, and cover with boards closely fitted before filling. In filling the house, pack the ice as closely as possible, and when a space is left around the sides and on the top by the melting of the ice as warm weather approaches, fill in the place carefully with sawdust or straw.

A simple board-house made by setting studs into the ground and boarding up on the *inside* of the studs will keep the ice quite well if made close and the ice quite surrounded with sawdust as it melts from the sides.—[*Exchange.*

Why is there always a strong draught through the key hole of a door? Because the air in the room we occupy is warmer than the air in the hall; therefore the air from the hall rushes through the key hole into the room and causes a draught.

FARMERS READ MORE.—If Agriculturists, generally, would read more, and reflect upon what they read, there would be fewer complaints, and their journals would become more a necessity with them. It is not so much that farmers object to "Book Farming," but they read and reflect so little that the utility and entertaining character of agricultural literature and information is not appreciated. Read more, farmers, and you will be better pleased with your papers—cultivate a spirit of inquiry after hidden truths in your profession, and you will soon perceive that you cannot get along without these aids. When the mail-boy returns from the office, they will be the first enquired for, and the first to be read with studious attention. They will afford more pleasure and profit, because you will find that which bears nearest relation to your pursuits. Never throw aside your Agricultural papers, but read them attentively until you know everything in them. It may be hard to do at first, but per severe, cultivate the habit, and soon, very soon, what has heretofore been irksome and unpleasant will be your chief pleasure. Papers are too frequently thrown aside, and pronounced worthless, because they have not been read. Don't do this—it is unjust to the publisher and unjust to yourselves. Again we say read more—and more attentively—break the crust and get all the good within the crust. You can no more pronounce judgment on your paper without reading than you can tell the flavor of a thing without smelling or tasting.—[*Southern Rural.*

HOW TO MAKE A SMOKE-HOUSE.—Having given you my method for curing and keeping hams, let me add my plan for a smoke-house. No farmer should be without a smoke-house, and such a one as will be fire-proof and tolerably secure from thieves. Fifty hams can be smoked at one time in a smoke-house seven by eight feet square. Mine is six by seven and is large enough for most farmers. I first dug all the ground out below where the frost would reach, and filled it up to the surface with small stones. On this I laid my brick floor, in lime mortar. The walls are brick, eight inches thick and seven feet high, with a door on one side two feet wide. The door should be made of wood and lined with sheet iron. For the top I put on joists two by four, set up edgewise, and eight and a half inches from center to center, covered with brick, and put on a heavy coat of mortar. I built a small chimney on the top in the center, arching it over and covering it with a shingle roof in the usual way. An arch should be built on the outside, with a small iron door to shut it up, similar to a stove door, with a hole from the arch, through the wall of the smoke-house, and an iron grate over it. This arch is much more convenient and better to put the fire in than to build a fire inside the smoke house, and the chimney causes a draft through into the smoke-house. Good corn cobs or hickory wood are the best materials to make a smoke for hams. The cost of such a smoke-house as I have described is about twenty dollars.—[*Rural New Yorker.*

MILK-SICKNESS.

In the *Valley Farmer*, for September, 1858, under the head of "Milk Sickness," we gave some extracts from the first volume of the "Report of the Kentucky Geological Survey," showing the coincidence in the peculiar geological structure of the soils where this mysterious disease almost uniformly prevails. At the conclusion of our remarks upon the subject, we intimated that, in a future number, we would publish what Dr. Owen offers as a remedy for this disease, assuming, as he does, the fact that it is caused by the animals partaking of certain astringent salts found connected with these earths, either in the water drank by the animals, or these peculiar soils may have given rise to a species of vegetation producing astringent leaves or fruits; since it is an established fact, in vegetable chemistry, that soluble, saline substances will enter into the circulation of the plant, and may be found crystalized in the cells of its organization. Or these astringent salts may effloresce in certain conditions of the atmosphere; which may either creep up or otherwise settle extraneously on vegetation itself.

It was our intention to publish Dr. Owen's remarks, suggesting certain treatment as a remedy, in the succeeding number of the *Valley Farmer;* but the subject, at that time, was overlooked. We now fulfill that promise, and give some further extracts from the second and third volumes of the Geological Report, on the same subjects, in regard to the ingredients contained in the soils of other portions of Kentucky, where the disease is also common.

The treatment proposed by Dr. Owen is as follows:—"Copious draughts of castor oil; or, in its absence, sweet-oil should be freely given; repeated even if rejected by the stomach, and, if possible, until it acts on the bowels; followed by the administration of sulphur and charcoal. If locality permit, sulphuretted saline waters will be found highly beneficial. Judging from the symptoms of the disease, warm baths will be an important auxiliary. For animals—oils, sulphur, charcoal and green-salted corn, will be found most likely to relieve. Petroleum, Seneka, or rock-oil, is said to be a very efficient remedy."

In this connection, Dr. O. further recommends, "That, where practicable, the free application of caustic lime to all such land (i. e. land containing acid, sulphates of alumina, and protoxide of iron), as a counteractor of the unhealthy influence in milk-sick districts, and as an important means of hastening the removal of the deleterious effects of these salts. It would not only facilitate the oxidation of the sulphur, by its catalytic affinity for sulphuric acid; but it would neutralize and remove this acid, as fast as it was formed in the soil, and thus give rise to the formation of gypsum; which would not only greatly improve the fertility of the land, but it would, at the same time, purify the atmosphere of a redundant quantity of carbonic acid which would be apt to occur in a partially deuoxidized atmosphere; and which is, moreover, apt to be generated wherever there is a rapid decomposition of vegetable matter in hot and burned situations; and especially in confined valleys, where there are obstructions to the free circulation of air.

"Such confined valleys are very likely to occur where shaly rocks are abundant, as these are easily gullied out by the action of air and water."

In the further progress of the report, Dr. Owen remarks: "I am able, at this time, to call attention to the chemical analysis of the soil collected from a narrow strip of beech-timbered land, ranging through the eastern part of Fayette county, where silicious mud-stones and shales are super-imposed on the Isotelus and Septæna beds in the blue limestone. It is, perhaps, not as characteristic a sample as I shall be able to supply hereafter from Grant county; where these strata, known as the 'rotten sandstone,' are more developed, and extend over a wider belt of country. It is particularly worthy of note, that the only milk-sick region which I have, as yet, become acquainted with on any part of the range of the blue limestone formation, follows the out-crop to the surface of this so called 'rotten sandstone,' and its accompanying characteristic soil."

In referring to the Knob Formation of Bullitt county, Dr. O. further remarks: "Two varieties of mud-stone have been analyzed, which is interstratified in the blue limestone underlaying the beech-flats spoken of in the second chapter in connection with the beech-flats of Fayette

referred to above. This is a more argillaceous rock than the preceding sandstone; containing from 8.65 to 10.25 alumina, with a little oxide of iron; only a trace of lime; 1.40 to 2.30 carbonate of magnesia, and the largest proportion of sulphuric acid in any sandstone yet examined—the very ingredients, therefore, calculated to produce, by its decomposition, astringent salts. It is worthy of special note, in this connection, that the only regions in the range of the blue limestone formation where I have found milk-sickness prevail, follows most remarkably the out-crop of this mud-stone, as I have elsewhere stated."

The analysis of the water, found in a pool in another part of the State, which has produced milk-sickness, is here given. The pool or spring from which the water was taken, is represented as coming from "the foot of an oak tree in Barton Mathers' pasture, which runs over the out-crop of the silicious mud-stone in the adjacent hillsides. The principle ingredients were: Chloride of magnesium; chloride of sodium; bi-carbonate of magnesia; bi-carbonate of lime; sulphate of soda; sulphate of magnesia; suspended alumina (or else fine silicious earth).

There are no poisonous metals in this water. * * * This water is remarkable for the large quantity of magnesia present, which is much above the normal quantity even in waters flowing from the blue limestone; which probably exists, in parts, at least, in the state of chloride. I have no doubt but that this water acts first as an astringent, and finally as an irritant, and a debilitator of the system.

"Many cattle have died suddenly in the enclosure where this water collects, not long after drinking at the above pool, in dry seasons of the year, with symptoms of weariness, giddiness or an affection in the head, which causes cattle to keep the head in constant motion from side to side; and a bloody appearance is seen on the surface of the mucus membrane on the intestinal canal after death."

Several other places are recorded, subject to milk-sickness, where the geological formation corresponds with the foregoing.

Another specimen of sandstone, and labelled mud-stone, from a pasture near Carlisle, where cattle die of milk-sickness, in Nicholas county, Ky. The principal ingredients are here named; but, in a note appended, Dr. Owen says:—"Nothing in the composition of this rock, explains the origin of milk-sickness in this region."

We have thus endeavored to throw all the light we could gather upon the subject of this singular disease, from the facts furnished us in these valuable reports, in addition to the remedy proposed by Dr. Owen. But with all these facts, the subject is still enshrouded in mystery; for, whether the disease results from the astringent action of minerals alluded to, or whether from more active poisons, of which the analyses furnished by these reports show no evidence, we are at a loss to account for the fatal effects produced upon persons, when partaking of so small a quantity of the milk, butter, or the meat of these animals, which have been exposed to the causes producing the disease. If the disease was only extended to those who partook of the milk and butter, it might be accounted for upon the supposition that it was passing off from the cows, in a concentrated form, through the lacteal secretions; but, when the disease is communicated to men and dumb animals, from eating but an ounce or two of the meat, and to a degree more manifest, than marked its effects upon the cattle themselves, we must continue to seek for more light before the disease can be satisfactorily explained.

Breeding Stock as a Branch of Farm Management—Winter Care.

As the demand for agricultural products is everywhere increasing, it is a very encouraging sign of the times to know that there is a corresponding improvement in the various departments of agriculture. But the greatest improvements are to be observed in those sections of the country, subject to the most rigorous climate, and which are favored with the fewest natural advantages—hence it is that necessity forces improvement.

In the more favored climate of the South and West, where stock can survive through the winter with comparatively little care and attention, they are too generally left to shirk for themselves, and not unfrequently suffer immeasurably during the sudden alternations from heat to cold that characterize the winters of this section of country.

As a matter of pecuniary interest to the farmers, we have frequently urged the importance of increased care of stock during winter. The loss sustained from this neglect, as well as the great amount of suffering the animals are compelled to endure, we have again and again endeavored to portray, and will not at this time repeat, but will make some extracts from a lecture delivered before the Highland and Agricultural Society of Scotland, by Dr. Anderson, chemist to the Society, touching the important principles upon

which success in this department of farming depends:

The feeding of stock is exactly one of those subjects which can be most successfully advanced by studying the principles on which it depends; and though these involve many most complex chemical and physiological questions, we have obtained some foundation on which to go. The food which an animal consumes is partly assimilated and partly excreted; but, if it be proportioned to its requirements, its weight remains constant, and hence we learn that food does not remain permanently in the body. If, now, an animal be deprived of food, it loses weight, owing to the substance stored up in the body being used to maintain the process of respiration and the waste of the tissues. The course of events within the body is, so far as known, somewhat of this kind. The food is digested, absorbed into the blood, a certain quantity being consumed to support respiration. If the food is properly adjusted to the requirements of the animal, its weight remains unchanged—the quantity absorbed and that excreted exactly correspond to one another; but if we increase the food, a part of the excess will be deposited in the tissues to add to its weight. Now, the quantity absorbed depends upon the state of the animal—a lean beast thoroughly exhausting its food, while, when it is nearly fat, it takes only a small proportion. So, likewise, if the quantity of food be greater than the digestive organs can well dispose of, a certain quantity escapes digestion altogether, and is practically lost. The problem which the feeder has to solve is, how to supply his cattle with such food and in such proportions as to insure the largest increase with the smallest loss. In solving this problem we must, in the first place, consider the general nature of the food of all animals, the constituents of which may be divided into three great classes—the nitrogenous matters, which go to the formation of flesh; the saccharine and oily, which support respiration and form fat. It is sufficiently obvious that these two great functions of nutrition and respiration must proceed simultaneously; the most advantageous food will be that which supplies them in the most readily assimilable forms and in proper proportions. In regard to the first of these matters it will be obvious that if two foods contain the same quantity of nutritive matters, but in one they are associated with a larger quantity of woody fiber or other non-nutritious matter, the latter will have considerably less value than the former; the necessity for a proper balance of the two great classes of nutritive constituents is also sufficiently obvious, for if, for example, an animal be supplied with a large quantity of nitrogenous matters, and a small amount of respiratory elements, it must, to supply a sufficiency of the latter, consume a much larger quantity of the former than it can assimilate, and there is practically a great loss. We may determine the proper proportion of these substances in three different ways—1st. We may determine the composition of the animal body. 2d. We may examine that of the milk, the typical food of the young animal, and 3d. The results of actual feeding experiments may be examined. But, however valuable the data derived from these experiments may be, they are less important than those derived from actual feeding experiments. In fact, it by no means follows that the proportions in which the substances are found in the animal are exactly those in which they ought to exist in the food. On the contrary it appears that while one-tenth of the saccharine and fatty matters are assimilated by the animals, only one-twentieth of the nitrogenous compounds, and only one-thirty-third of the mineral substances in the food, are assimilated by the animal. On the other hand, however, it must be remembered that the particular compounds also exert a very different influence. Thus, a pound of fat in the food, when assimilated, will produce a pound of fat in the animal; but it requires about two and a half pounds of sugar and starch to produce the same effect. The broad general principle arrived at is, that we must afford a sufficient supply of readily assimilated food containing a proper proportion of each class of nutritive substances. But there are other matters also to be borne in mind, for the food must not only increase the weight of the animal, but also support respiration and animal heat; and the quantity of food required for this purpose is large. It appears from Boussingault's experiments, that in a cow eighteen ounces of nitrogenous matter are required to counterbalance the waste of the tissues—a quantity contained in about ten or twelve pounds of wheat flour; and it is well known that an ox expires four or five pounds of carbon daily, to supply which one hundred pounds of turnips are required. We see from this large quantity relatively to that used up which is required for the maintainance of these functions, and the importance of adopting such measures as, by restraining them within the narrowest possible limits, produce a saving of food. *The diminution of muscular exertion, and keeping the animal warm, so that a small quantity of food may be required to act as fuel to maintain*

the animal heat, are the most important considerations. Although the presence of a sufficient quantity of nutritive matters is an essential qualification of all foods, *their mechanical condition is not unimportant; for unless its bulk be such as to admit of the stomach acting upon it properly there must be an appreciable loss;* and there is no greater fallacy than to suppose that the best results are to be obtained by the use of those which contain their nutritive matters in a small bulk. As a practical question the principles of feeding are restricted to determining how the staple food produced on the farm can be most advantageously used to feed the cattle kept on it; and on this point much requires to be said. It appears that they can be best made use of when combined with more highly nutritious food, such as oil-cake or rape; and when this is properly done, a very great advantage is derived. It appears from experiments that sheep, which when fed on hay only, attain a weight of ninety pounds, reach a hundred when rape is added. The subject cannot be completed without referring to the value of the dung produced, which has been variously estimated.

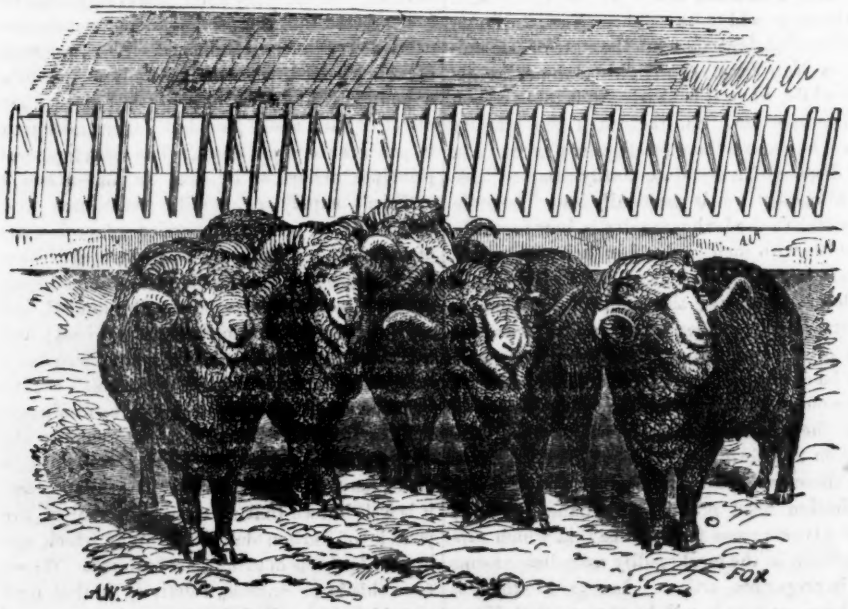
In the United States, Indian corn must be made to take the place of oil-cake and rape which are so extensively used in Great Britain, where the climate proves unfriendly to the production of Indian corn.

[Written for the Valley Farmer.]

A CURE FOR SCRATCHES IN HORSES.—*Editors Valley Farmer:* Take some lamp oil and mix in it a little white lead, till the oil becomes of a straw color. Wash the legs perfectly clean, and rub them dry. Then apply the mixture and rub it well on the affected parts. By doing this three or four times, the horse will be cured. I have tried it.

TO CURE HORSE DISTEMPER.—I will also give you my remedy for the horse distemper, and, if the tar be good and pure, it will cure the disease very soon. Take a small paddle and get on it what tar it will hold; open the horses mouth, and get what tar you can into the mouth. By doing this a few times the horse will commence improving. It will also prevent horses from taking the disease. These remedies are simple, can do no harm and are effectual. Yours,

RUSTICUS.



A GROUP OF FRENCH MERINO BUCKS.

We believe it is now generally conceded, that of the fine wool sheep, the French Merino are the best. Those who have tried them, and also the Saxony or Spanish Merino, have decided in favor of the former. They say the French Merino possess stronger constitutions, greater size, produce much heavier fleeces, and although the wool is not quite as fine, yet it commands as high a price in market. Those who intend to go into sheep raising, where the fleece is the primary object, and still where the mutton is not entirely lost sight of, cannot get a better breed than the French Merino.

BREEDING AS AN ART.

NUMBER THREE.

There is scarcely any subject connected with the improvement of domestic animals with regard to which so much has been written, as that of "in-and-in-breeding." But notwithstanding it has been almost a constant topic of discussion among prominent breeders for many years, and has engrossed the attention of many able agricultural writers, it is still a vexed and unsettled question. Indeed, whether we consider the fine-spun theories of different philosophical, or *would be* philosophical, writers, or the matured advice of practical men who have devoted their lives to the task of establishing a marked improvement in the character of their flocks and herds, we shall find their opinions almost as diverse as the characters of the individuals who entertain them.

On the one hand we are confidently told that any marked and permanent improvement can be obtained only by "in-and-in-breeding," and that the supposed dangers of the system exist only in the imaginations of its opponents. With these, pedigree is the "one thing needful," and this obtained, we are led to believe that success is easy and certain.

Others, again, assert with equal assurance that all *real* improvement is to be obtained by careful and judicious crossing of animals possessing at least but a distant relation to one another, and that the secret of success lies in the art of proper selection. With these form is the primary matter of consideration and pedigree a thing of trivial or comparative little importance.

True, these are extreme views, but between these extremes there may be found almost an infinite variety of opinions, very few breeders agreeing precisely as to the relative importance of the two different principles we have named.

It may, perhaps, be safely asserted that under certain circumstances both propositions may be true. As, for instance, it is unquestionably better to breed "in-and-in" two animals of very superior form than to select from animals distantly related but of inferior character. Again, it is clearly preferable to couple first-class animals having little if any relationship, rather than ordinary ones however closely related. To lay down a rule which will apply universally, or even in the greater number of cases, is perhaps impossible. The large majority of breeders are compelled to select from a limited number of animals, and the circumstances under which a rule must be applied would be as various as the qualities and relationship of the animals.

It is a very common piece of advice that "we should breed only from the best animals," and a very excellent bit of advice it is, but it is to be remembered, that the best animals which the farmer can obtain, are very often far from being the best in the country. But supposing he could obtain any number of the finest animals, still there would be a wide difference between them, both in regard to their relationship to one another and their general qualities, and it would prove as difficult to lay down any fixed rule which should govern his selection in this case as in the former.

The true course for the breeder, is first to discard all prejudices for or against any particular methods. Inform himself as far as possible as to the true character and operation of the natural laws which govern the reproduction of life in the stock he is breeding, and then rely upon the teachings of his own judgement rather than upon any abstract and arbitrary rule.

In considering the nature and operation of these natural laws which govern the reproduction of animal life, the first inquiry which presents itself is, are there any general laws which will apply to all the various species and varieties of animals, and if so what are they? we observe two. First, that life is produced by the union of two vital forces, the male and the female. Second that "like will produce like," or in other words, that the offspring will partake of the mingled characteristics and qualities of both parents. These may be considered fundamental laws of all organic life, and obtain as forcibly in the vegetable as the animal kingdom, Grains and Fruits are no less the product of the union of the male and female than the horse or the cow, and that "like will produce like" (or in other words the law of type), is as clearly shown by crossing the black with the yellow corn, as the ass with the mare.

These laws though very stern, are not in all cases absolutely inflexible.

To the first law we find some exceptions among animals, but it is to be observed that it is only among those of the very lowest order, some of which seem to be but one degree removed from the vegetable, such as the common earthworm, the oyster and some others. Among all the higher orders of animals this law is absolutely inflexible and without exception.

The law of type is also exceedingly stern and unyielding, and if we consider it with reference only to its operation upon different *species* of animals, we may say that it is entirely without exception. By this we mean, that the different

species of animals are, through the operation of this law, kept separate and distinct, and the production of any new species effectually prevented. It may be said that the mule, resulting from the union of the ass with the mare, the offspring of the llama and the alpaca, or the alpaca and vicuna and some others are exceptions to this rule. But these hybrids can hardly be considered as exceptions to this law, for all hybrids are barren, whether coupled with one another, or with either branch of the parent stock. Thus the mule is incapable of reproducing itself, nor can it produce offspring if coupled with the horse or the ass. The allied species of the horse and the ass are thus preserved separate and distinct, and the law of type operates with as much *real* force as though no hybrid resulted from their union.

We see in this a striking illustration of the infinite wisdom of the Creator, who has thus provided for the preservation, and transmission through all time, of the distinctive features of the various species of animals. Had not bounds been thus set to the intermixture of animals, all traces of any distinctive characteristics in varieties of animals of the same genus would long since have been swept away, excepting such as were due to a diversity of soil and climate.—[*American Stock Journal.*

[Written for the Valley Farmer.]

CUTTING FEED FOR STOCK.

EDS. VALLEY FARMER:—There are too many persons who give too little attention to the subject of cutting feed for stock. It has been ascertained by the most thorough experiments that where the same kind of feed is consumed, for every twenty head of cattle or horses there is a saving of one dollar a-day by cutting the feed. This in four months would amount to one hundred and twenty dollars.

This is merely one source of saving or profit. Another view of it is, that every farmer has or can have a large amount of stock fed in the form of straw, corn stalks, turnips, bran and meal, which, with a good, cheap and durable feed cutter, would keep his stock in good condition, and save hundreds of dollars worth of hay for market; or in times of scarcity, to save the lives of many valuable animals, when, perhaps, the feed could not be bought, or the owner of the animals could not easily raise the money without sacrificing a portion of his stock. There are others who appreciate the importance of this subject, but neglect from month to month and year to year, a few hours' labor and a few dollars' expense, to provide the necessary facilities for feeding cut feed. It is from such that we occasionally hear a growl about the severity of the winter—the expenses of keeping their animals—their unprofitable business. To such, and all others, we say, provide facilities for feeding your stock cut feed. Preserve your straw and stalks in good order; raise a small field of rutabaga or other turnips, and with your meal and bran, you can keep your stock in good order and sell a portion of your hay for cash—and the nation, as well as the individual, will be richer and better for the experiment.

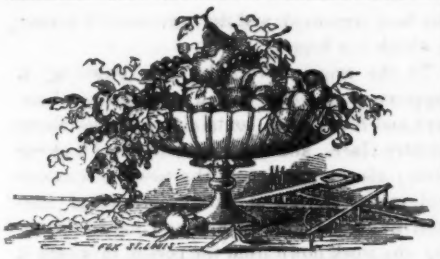
ECONOMY.

SHEEP HUSBANDRY BENEFICIAL TO FARM LANDS.

In former articles on the raising of sheep we have omitted to allude to the incidental advantages that result from that branch of farming. We consider the great ultimate profit of stock raising consists in the improvement of the soil. To keep the soil of any farm, however rich naturally it may be, in a productive condition, without connecting with other branches of farming that of stock, requires a more thorough system of management and regular rotation than most of our farmers are apt to practice. The regular manufacture of manure if not absolutely repudiated, by many of them is quite neglected. While this is the case stock-raising does much to retain the vitality of the soil; and sheep, in sections of the country adapted to their habits, are not only the most profitable animals to raise, but for the improvement of the soil are the best.

Pasture lands, unless frequently broken up, often become overgrown with briars and other wild plants, which sheep will readily consume, though refused by all other kinds of stock; while their droppings tend to incourage the growth of the natural grasses.

In the ordinary method of preparing wheat lands, the herding of sheep during night is of great benefit. It not only adds to the crop the best kind of manure, but renders the surface smooth and comparatively compact, just the condition required by this crop. In the earlier period of our farming experience we lived near two Indian reservations; the tribes having become nearly extinct, the lands by the operation of law fell into the hands of stock companies or share-holders. Upon these lands, besides the pasturing of cattle and horses, large flocks of sheep were kept and daily attended by shepherds. At night the sheep were driven up and herded upon the neighboring farms. In the fall they were usually turned upon the fields intended for wheat, both before and after they were plowed, the farmer paying a certain amount for each night for the privilege. This course has been so long practiced, and which we believe is still maintained, that it is sufficient evidence of its benefit.



HORTICULTURAL.

THE DELAWARE GRAPE.

SPURIOUS VINES SOLD UNDER THE NAME OF DELAWARE.

It is to be regretted that as soon as a superior fruit is brought before the public, numerous unprincipled speculators and vendors offer and sell to the public a spurious article, assuming the name of the genuine fruit; and the more valuable the fruit the greater the efforts to impose upon and swindle the public. When the Delaware grape first began to attract public attention, certain persons who had never seen the two together, neither the fruit or vine, suggested the opinion that the Delaware was identical with a foreign variety known as the Traminer. Even the authors of some fruit books, written about the time the Delaware came before the public, adopted the same opinion. This gave license to numerous dealers who could not procure the Delaware, to substitute and flood the country with the Traminer. This has led to a comparison of the two, side by side, and it is found that their characteristics, except in the simple appearance of the respective fruits, are as widely different as almost any two other kinds, so much so, that, as a distinguished fruit grower justly remarks, "the difference between them is so apparent that a man by the sense of feeling could easily tell one from the other." The buds of the Traminer, like all foreign varieties, are much larger and more prominent than of the Delaware. The bark of the Delaware differs widely in color and hardness from that of the Traminer, the latter being covered with a distinct bloom, which does not appear at all on the Delaware; while the terminal shoots are more distinct, those of the Delaware being covered with thick down while the other has none. The Traminer has soft wood, with large, light colored spots upon it, and quite tender and liable to be killed to the ground unless protected in winter, while the Delaware is as hardy in the Northern climate as the wild fox-grape. In comparing the leaves they are also quite distinct. The Traminer has a thin crimped leaf which cannot be pressed out smooth. That of the Delaware is perfectly flat, thick, and of a firm, leathery character, like the Catawba, Concord and some others of our native sorts. In resisting the effects of our summer suns and the blights to which some of our grapes are liable, the Delaware is also peculiar. Our old veteran grape-grower—Nicholas Longworth—who, before he had compared the two varieties, rather concurred in the opinions of some of the German vine-dressers of Ohio, that the Delaware was identical with their native Traminer, now pronounces them as widely distinct.

We have been thus minute in the comparison of these two varieties of the grape, in order that our friends who may have been imposed upon in the purchase of spurious varieties, for the Delaware, may know wherein they differ.

But our chief object in taking up the subject at this time, is to expose an effort that has recently been made to detract from the merits of this superior grape by claiming for it identity with an inferior wild variety. We allude to a communication from Charles B. Ott, of Pleasant Valley, Bucks County, Pa. in the November number of the *Gardener's Monthly*, in which he pretends to give the "History of the Delaware Grape," from having tasted a single bunch, given him while in Philadelphia, by the editor of that paper. The writer labors to show that the Delaware is an old, unproductive variety that has been growing in his neighborhood "*at least* thirty years, long before we had the Catawba and Isabella." He further states: "I have two large vines growing in my garden as thick as an arm, which were planted about eighteen years ago, and never bore scarcely anything until last year, when I had about half a crop."

We have the testimony of such men as Charles Downing and a host of other distinguished amateur cultivators and judges of grapes, who are entirely disinterested in the sale of vines, all pronouncing the Delaware one of the most *productive*, as well as the best of all hardy grapes ever introduced to pul lic notice in this country. Now, in the face of such testimony, and in view of the limited acquaintance which Mr. Ott acknowledges he has with this fruit, he can hardly be regarded as competent authority for the "History of the Delaware Grape." Of the *motives* which may have prompted him to say what he has of it we will not now express an opinion, nor should we have deemed the writer or the subject worthy of notice at all but for the respectable medium through which his communication is given

to the public. In conclusion, we will, however, advise all who wish to procure plants of the genuine Delaware grape to apply to honorable and responsible persons who have a reputation at stake, and who are known to be reliable propagators of the true variety.

When the country becomes more thoroughly supplied with this choice fruit, and the price of vines is reduced to the standard of other good sorts, there will be but one opinion in regard to the superior merits of the Delaware.

IMPROVEMENT OF COUNTRY HOMES.

Twenty-five years ago the art of landscape gardening was but little known or practiced in the United States, and but very little effort was bestowed by even the most wealthy of our rural population to preserve the natural beauties of the landscape, much less to improve them.—But within this brief period how marked the change! we have only to make a survey of the surroundings of our older cities—for instance, Boston, New York, Philadelphia, Cincinnati, the banks of the Hudson, or indeed, through any portion of the older sections of the country, and the eye meets with beautiful residences built upon the most improved architectural styles, surrounded with neatly kept lawns, and gardens, ornamented with every variety of tree, shrub and plant, obtained from all parts of the globe.

It is to the late A. J. Downing, more than all other men besides, that the country is indebted for this great improvement in rural art and rural taste. Born with an elevated and refined taste, which was improved by culture, and the natural inclination of his mind being in this direction at an early age, he employed his pen with the view to impart his taste and love for the beautiful in nature to his countrymen, and to adorn and make happy the home of every resident in the land. With but an ordinary education, his writings, while they imparted instruction in the improvement of every department of rural life, were of the most interesting and pleasing style.

Among the valuable works he left as monuments to his memory, is his LANDSCAPE GARDENING AND RURAL ARCHITECTURE. This volume has recently passed through its sixth edition, *enlarged, revised and newly illustrated; with a supplement by* HENRY WINTHROP SARGENT, of Wodenethe, a place on the banks of the Hudson, usurpassed in the artistic style in which it has been improved, and the neatness and beauty in which it is kept.

To the original work by Mr. Downing, a supplement is added which occupies one-hundred and fifty pages; containing remarks about country places, and the best methods of making them; also an account of the newer deciduous and evergreen plants, lately introduced into cultivation, both hardy, and half hardy; bringing the work down from the period in which it was originally written, to the present time.

The great increase in the number and extent of rail roads that now connect with almost every city in the Union, offers facilities to many of our business men to establish their homes in the country. These advantages are now already enjoyed by thousands of our business men, and the number is daily increasing. Many of these, having been brought up in the city, have but little idea of the first steps necessary to be taken to improve a country home. To such, this volume will be found of inestimable value. Those who are not able to employ a professional landscape gardener, may with the instruction and plans furnished in this book superintend and manage the laying out of their grounds and the planting of trees &c., themselves, and vastly improve the surroundings of their dwellings at comparatively small cost. But where a *good* landscape gardener can be obtained it is better to employ one. Where native trees still remain, with proper discrimination and judgement these may be thinned out, leaving such as may be necessary in proper places, and thus saving both time and money in securing them by artificial planting and culture.

The new edition of the work referred to, is published by A. O. Moore and Co., New York, now Saxton, Barker and Co. It is executed in the very finest style of these popular publishers, and should have a place in every public and private library.

GRAFTING THE GRAPE.—Instead of propagating grape vines, as usually done by a single eye as a cutting, I always found it a more sure way to graft them (whip grafting) to a piece of root, and whenever it was a scarce kind, of a long jointed growth, as American grapes generally are, one bud was sufficient.

I hardly ever lost more than five per cent. I never used any grafting wax, but planted the grafts in the ground immediately, and covered consequently the united place at once with earth. This is undoubtedly a much safer way than relying on single buds as cuttings. When grafting on stumps, taking two or three buds on the graft, I have sometimes had grapes the first season, but always a fair crop the second summer.

HOT-BEDS.

The competition among market gardeners has done much to afford an abundant supply of early vegetables for the large towns and cities generally, throughout the country. Gardeners who raise vegetables for market start them in hot-beds as early as December or January; but in the country there are thousands of farmers who make no effort to supply their tables with the vegetable luxuries of the season until the period of open culture arrives. Hot-beds upon a very cheap plan can be made which will afford an abundant supply of some of the tender late growing vegetables, such as radishes, lettuce, cabbage, tomatoes, sweet potatoes, &c., several weeks before they can be started and grown in the open air. Many persons are deterred from having hot-beds because of the cost and trouble of procuring regularly glazed sashes. For family use the various plants that require forcing may be very well grown under frames covered with common cotton cloth, saturated with linseed oil. A writer in the *Gardener's Monthly* gives the following as a better composition for the application to the cloth of hot-bed frames: take three parts of pale linseed oil, one ounce of sugar of lead, four ounces of pale or white rosin; the sugar of lead to be ground in a small portion of the linseed oil, and then put into the remainder of the oil; the rosin then to be added, gently warmed, and stirred till thoroughly mixed.—The muslin is then to be stretched and tacked tightly over the frame, and the mixture laid on with a brush. The muslin should be rather thin, bleached shirting.

This preparation may be somewhat more durable, but when simply oiled, and when the season for their use is over, if they are carefully housed the cloth and frames will last for a number of years. The cost is but little, while the quantity of early vegetables that may be thus secured ought to be considered as indispensable in every family living in the country.

The method of filling and preparing hot-beds has been frequently given, but every year adds to the number of beginners, and for the benefit of such we give the following instructions:

The situation for a hot-bed should be on the south side of a wall or fence, but in no way connected with a building calculated to harbor rats or mice; it should be rising ground so as not to be liable to overflow from water. Some gardeners dig a pit eighteen inches or two feet to contain the manure; others make them on the surface of the ground which affords a better opportunity to renew the lining of manure on the outside of the frame, in order to renew the heat when required. The frame to contain the manure may be six feet wide and any desired length, and made highest on the side to be placed to the north; the manure may then be placed in to the depth of twenty or twenty-four inches, this should be covered with six or eight inches of good garden mold. The manure should be fresh from the horse-stable and contain a good proportion of straw, and after laying awhile in a heap it may be placed in the frame. The bed, after it is filled, should remain for two or three days before the seeds are planted, in order to allow the excess of heat to pass off—the soil may then be stirred to kill the young weeds that may have taken a start; when the seeds may be planted.

After a crop of lettuce, radishes, cabbage plants, &c are raised, the same bed may be used for forcing sweet-potato plants, but if not at liberty in time, a new one should be made.

Hot-beds may be made any time during February or March. The earlier they are made the more care will be required in attending to the young plants and protecting them from the changes in the weather.

[Written for the Valley Farmer.]

THE FUCHSIA, OR LADIES' EAR-DROP.

One of the most graceful and elegant of exotics is the Fuchsia. And though it cannot lay claims to excellence for planting out in the open border during summer, like the Verbena and others, yet, for the greenhouse, the plant cabinet or parlor window, its beauty and ease of cultivation, should render it one of the most popular of flowers, instead of which it is comparatively little grown here.

The pendant, ear-drop-like flowers, of curious shape and beautiful colors, clustering thickly at the points of every shoot; the neat habit of the plant itself, and the large, luxuriant, glossy foliage; form, in a well-grown plant, an object of great beauty, and one worthy to be admired, as it uniformly is, by all who have the pleasure of witnessing it.

Plants should be procured in the spring; and, as they will then be in small pots, they should at once be shifted into larger pots, and be kept growing, close attention being had meantime, to the shape the plant is to assume. They are grown into various forms, as taste or fancy dictates, such as the standard, with a clean straight stem, and a head like a little tree; the bush form, which is done by pinching out all the leading shoots, and causing it to throw out numerous other shoots, low and spreading; and the pyramidal, which is had by training up a single stem two or three feet high, and allowing it to throw out side shoots from the bottom to the top, tapering all the way, each shoot being loaded

with blossoms and pendant with their weight. This last is the most natural, and, we think, the most desirable form, as the plant will almost naturally assume it without aid. The main shoot should be tied up to a stake, in the centre of the pot; any branches that may spring from the root must be taken off, but the lateral branches must be encouraged to grow from the base, and at regular intervals up the stem, thus giving the plant its natural and proper shape in all stages of its growth.

The soil best adapted for the Fuchsia, is a sandy loam, which may be made from decayed sods from the pasture, with about one-fourth each of sand and leaf-mold added. The plants require to be supplied liberally with water, during their season of growth and bloom, and should be kept in a partially shaded situation, as they do not enjoy the full glare of the noon-day sun. When not grown in a greenhouse, a shaded piazza, or cold frame on the north side of a building, would be the best situations to grow them in during summer.

A few plants thus grown, will be in bloom from May to October; after which they may be gradually put to rest, by witholding water; and in the absence of a greenhouse, may be pruned down, and wintered in a dry, warm cellar, in a dormant state. Little or no water need be given them until they are brought forth in the spring again to renew their life and growth.

The Fuchsia strikes very readily from cuttings; and as young plants make the best specimens, we advise to strike a batch from the old plants every spring. The old plants may be first started in a gentle hot-bed, the cuttings being placed in a little bottom heat will root very readily, when they may be potted off, and grown as above recommended.

We had the pleasure, recently, of seeing some of the newest and most beautiful varieties of the Fuchsia, that are now grown, at the greenhouse of Wm. Lucas, Esq. near St. Louis; and we can but commend the enterprize in Horticultural pursuits of this gentleman, in procuring new and rare varieties of these and many other greenhouse plants; and can truly say we wish there were many more such in our midst.

C. S.

St. Louis Nursery, Dec. 16th, 1859.

HOW AND WHEN TO EAT FRUIT. — Fruit should not be indulged in between meals, as though it was a luxury, but used in moderation at meal time, in the place of animal and other food. It should not be eaten for dessert, after a full meal has been made, as is usually done—a custom which cannot be too severely reprehended. Fruit may, with safety, be eaten at any meal, but it would be well to confine it to breakfast. The old saying will be found true by practice. "Fruit is good in the morning, silver at noon, and lead at night." Let it constitute a part of the breakfast, and be eaten at no other period of the day; let it be ripe and not eaten immoderately, and incalculable benefits will arise from its use, both in preventing the access and staying the progress of disease during the summer and fall months.—[*Hall's Journal.*

MERAMEC HORTICULTURAL SOCIETY

The eleventh monthly meeting of the Meramec Horticultural Society, was held in the house of Capt. Tyler. The President in the chair. The minutes of former meeting were read and approved. Two new members were elected, and one new member proposed.

THE GRAPE,

Was then taken up as the subject of the day. Mr. N. J. Colman, on call, opened the subject, remarking that not being aware of the subject, he was not prepared to speak as it deserved, and as he would wish; but would introduce it as one in which he was most deeply interested, and one which was now commanding general attention.

He advocated to a considerable extent, the cultivation of the new varieties. He said the Catawba had been long and faithfully tried in every soil and situation, and with every mode of pruning, and still was subject to the mildew and rot. The Norton's Virginia seedling has not been known to mildew or rot, is perfectly hardy, very productive, though the berry is small—is a most superior grape for its wine-making qualities; has been tested by vine-growers for many years, and pronounced perfectly healthy, hardy and a uniform bearer.

The Concord is ten days to two weeks earlier than the Catawba, is a fine bearer, full clusters—hardy at the North, and improves much in the South; indeed is extremely hardy. I can recommend it as standing foremost among the grapes in this latitude.

The Delaware, Diana, Rebecca, are also fine grapes, hardy and promise well. And the Herbemont is an excellent grape, but somewhat tender.

There is also another grape worthy of special notice. It is the Bullitt grape. I got through Mr. Byram, cuttings of this grape, from Mr. Taylor in Kentucky. Mr. Miller, of Pennsylvania, also got cuttings or plants from Mr. Taylor, I presume, and has disseminated it or called it the Taylor grape; but as a multiplicity of synonymes is much to be deplored, it ought to be called the Bullitt grape, as it had been grown in Ky. by a few persons, for twelve or fifteen years, and known by that name. It was said to have been discovered growing wild in the Cumberland Mountains, by a man named Cobb, who dug up the vine, and brought it to Shelby county, Ky. The farm on which it was planted, was subsequently purchased by a man named Bullitt, by whose name it has since been called. The vine is a most vigorous grower, with rather slim branches of a peculiar gray color. The leaves are long and deeply lobed, and of a yellowish green shade. While the Isabella and Catawba were killed to the ground, during the cold winters of '56 and '57, the Bullitt grape, in the same gardens, proved hardy to the terminal bud. The bunches are hardly as large as the Catawba; berries below medium size, growing very compact; color white, with a slight tinge of green inclining to yellowish on the sunny side when perfectly ripe. It is almost entirely without pulp, and when eaten, the skin is left as free as that of a currant, which, in texture and thickness, it very much resembles. It hangs on the vines after quite severe frosts have occurred, without apparent injury; and when gathered, may be kept into the winter with little care. Prof. Noble Butler thinks it is not inferior in any particular to the Rebecca or Delaware. My associate, Mr. H. P. Byram, of Louisville, Ky. after tasting it says: The fruit was exceedingly delicious and sweet, with a rich, pleasant, sprightly flavor. It ripens about two weeks before the Catawba.

The President remarked, that as many of the members were inclined to plant out grapes this season, it became a question of importance to know if they would be justified in going to such a largely increased expense in the first planting. In planting out the Catawba, it can be done at $25 to $30 per thousand, while the new varieties named cost four times the amount, and some of them more.

Mr. C. Connon said that he would not give up the Catawba; he conceived that the evils complained of could be much mitigated if not eradicated, by a judicious selection of location, and correct modes of culture and pruning.

The mildew and the rot he conceives are perfectly distinct; yet he finds quite a number speak as if they were identical. Although not as long acquainted with the open air culture, he had found causes inducing disease in the cultivation of the grape under glass, which throws considerable light on the open air culture, as the one was only developing the vegetative principle on a more limited and artificial scale than the other. He had found in the cultivation of the Black Hamburg under glass, that, where the roots ran through the fine soil in the borders, and penetrated the cold wet strata of subsoil, that the rot or shanking took place; and he had found that by adopting modes, by which the roots were prevented from thus descending, and caused to run more towards the surface, the rot was cured as well as prevented. This fact indicated good drainage, a fine, warm, rich soil, and judicious selection of location, so as to induce as much horizontal and as little perpendicular growth as possible in the roots.

The mildew is a different disease, of a parasitic character, caused by neglect and the want of cleanliness and ventilation. It is sometimes found on the stem, leaves and fruit. This I have always cured by the use of sulphur in powder, and is best blown on the parts affected, with a pair of bellows: while keeping the vine clean by washing and admitting the air freely among the leaves and branches, will prevent it entirely.

Keep the roots to the surface, drain and mulch in June. Keep the weeds down. Train on trellis, and prune, so as to secure the proper ventilation, and it may be found the Catawba is not so bad. All things considered, I like the Catawba for large planting, and I think when we understand it better we will like it better.

Mr. Colman being asked the best time and mode of planting, remarked in passing to the question, that in Cincinnati great attention had been paid to the Catawba; high and low locations tried; deep and shallow planting, large and small distances apart; free and sparing use of the knife; pole and trellis training; and still the Catawba was more or less affected yearly by mildew or rot. A committee had been appointed to test the full and free-growing system, and lately Mr. Buchanan, in a letter to Mr. Glasgow, says: "In this we have been disappointed; with this mode of training on trellis, and allowing free growth, the rot and the mildew are there."

In answer to the questions of the President and Mr. Allen, he said: Were I to plant out $25 to $50 worth of vines, I would plant the new varieties. The Concord, for example, in preference to the Catawba; for, while the question of healthiness is settled in favor of the Concord, it ripens two weeks earlier than the Catawba; and, of course, gives the grower the control of the market for two weeks at the time when every mouth is watering for the grape. At the same time, good Catawba vines, two years old, are worth $60 to $80 per thousand, instead of $25 to $30; and of course the difference in getting the land into condition, and planting out one-fifth of an acre, as compared with an acre, goes to reduce the first and current expense. While the advantage of the earliness in market, and certainty of crop, shows the balance most decidedly in favor of the Concord.

In regard to planting he said: By no means plant more than can be well planted. Select land either naturally drained or capable of the most thorough drainage. Put your drains 20 to 30 feet apart, and 3 feet deep. Trench the ground two to three spades deep. Mix the different classes of soil intimately, and all with manure. You thus mellow the soil, and allow the atmosphere to permeate it completely, and the roots can go anywhere. In regard to the distances apart, there is considerable difference of opinion. Plant at least from 6 to 8 feet apart, each way; Mulch well with littery manure.

As to time to plant, I prefer planting out the grape vine in the spring, as allowing more time to get the ground in good condition; and also of its being mellowed by the frost.

Mr. Connon said: In regard to pruning the grape vine, spring is the proper time (just before the sap rises); if the sap has commenced to rise they bleed: unless you let the buds open so as to have the leaves take up the sap. Still before the sap is in motion, is the safest. The mode of pruning depends upon the mode of growth desired. If upon poles, the long cane and short spur system is best. Keep the long cane. Cut down the older wood to two eyes in case any accident befalls one of the eyes. If both do well, rub one of them off, which growing up, forms the bearing cane of the next year. I regard the trellis as better than the pole method. The form of the trellis will regulate the pruning itself. Keeping the ventilation of the vine, and the renewal of the wood in view, I conceive that 15 inches apart is a good distance to leave the spurs on the trellis. As to the age of the vine for planting, I conceive that good one-year old plants are better, and will have made better progress in 3 years from planting out, than two year old plants. Society was then invited to dinner by Capt. Tyler.

THE AFTERNOON SESSION,

Was opened by Mr. C. Connon remarking that Major Turner had his vines upon trellis from 12 to 15 feet apart, upon the long rod and short spur system, and they were free from rot. Mr. C. remarked that upon the hills of this township it was impossible to trench more than three spades deep, as upon plenty of the ground most eligible for vineyards, there was no more than 6 inches of soil; and that being upon the porous limestone, prevented the roots from running too deep. The limestone rock kept them warm, and being so porous, afforded good drainage; and by a bountiful supply of good mulch, keep the roots moist and increase the quantity of the soil, and good and cheap vineyards could be created.

Mr. J. S. Seymour conceived the close planting in vineyards ruinous, and advocated in preference to 3 by 4 to have them 10 by 12 or 10 by 15 feet apart..

A member had his attention directed to a Catawba vine, grown by Mr. Heacock in St. Louis, seven years from the cuttings, extending over an area of at least 100 feet by 15, which bore this season nearly 800 bunches of grapes, and had no symptoms of disease. He also observed some vines on Elm Street, near Third, in the Washington garden, which had ripe grapes on the 6th of August He suggested that in planting out a vineyard, it would be well to look forward for a few years; for, as the production of wine would be on the increase, an enlarged home and foreign market would have to be sought out, and the class of wine most in use in this country, and especially in the non-wine producing countries, would command the readiest and best price. In Britain, the northern countries of Europe, and Canada, red or deep colored, strong bodied wines were most in use; and indicated in an industrial and commercial point of view to look ahead for at least ten years. He suggested the planting out of Norton's Virginia seedling, as combining in the greatest degree, health productiveness, hardiness and fine color, for dark strong wines.

Dr. Morse said he had all along been an advocate of the Norton's Virginia seedling, but his faith had lately been a little shaken.

The President certainly esteemed the Norton highly; its wine as far as his skill went, was one of the best. He hoped to see at a day not far distant, these comparatively worthless hills covered with smiling vineyards, and more smiling families; and when millions of dollars would be produced from these neglected lands.

This opened a prospect worth living and laboring for; and if this Society only achieved this, it would rank as one of the most valuable institutions of our country.

The President announced the next meeting, being the annual meeting, would be held at the house of Judge Tippet, on the State road, on the first Thursday of December.

On motion the meeting adjourned.

WILLIAM MUIR, Sec.

[Written for the Valley Farmer.]

LANDSCAPE GARDENING.

By M. G. KERN, Author of a "Practical Treatise on Landscape Gardening."

EDS. VALLEY FARMER:—In response to your friendly request for an occasional communication from my field of operations, as a Landscape Gardener, I can state, with much pleasure, that the taste for rural improvements, and the love for gardens and well-arranged grounds, is steadily and successfully growing in and around this great metropolis of the West. The demand for landscape gardeners, artists, or traveling horticulturists, however, is not yet great. After all the sad stories and accounts of disappointments to which the community has frequently been subjected by various individuals, one need not wonder that professional services are, in many places, not only in no demand, but even feared or dreaded.

I have just finished the improvement of the grounds of the Hon. HENRY T. BLOW, a sketch of whose place, as laid out by me, you will find enclosed. If you deem it worthy of publication in your journal it is at your service. An example taken fresh from the battle-field is undoubtedly a fit foundation upon which to base some hints and explanations, to guide the inexperienced improver in his first attempts at landscape gardening, showing more forcibly some leading, practical considerations, by which the actual work can alone be carried on with success. Book-knowledge in landscape gardening has often caused much perplexity and trouble, when put to trial; practical knowledge, however, has always come out triumphant. The enclosed design is, therefore, not handed to you to be admired or praised. It has its faults, undoubtedly, but it is simply offered as an illustration of how a garden may be laid out.

The grounds upon which the design has been executed embrace about three acres, forming the immediate front lawn of the mansion. The greater portion of the former grounds had been separated from the piece in question by the opening of a public street. It had been for more than ten years a well-kept pleasure-ground, thickly stocked with beautiful evergreens, shrubs and flowers, besides a great abundance of native forest trees, thus forming an interesting place which could not but excite the admiration of every visitor—lacking, however, that peculiar, happy effect of arrangement which we admire in natural, as well as in garden scenery.

The use of the axe had first to be resorted to, to abate many of the forest trees which encumbered the ground. It may not be amiss to observe at this time that the clearing of a grove or forest does not simply consist in removing all the poorer or deformed trees, for the benefit of the remaining ones, but it should be done with a strict regard to the development of some leading forms and features. Distinct groups should be formed in the most favorable spots, which may appropriately be connected with each other by single well-formed specimen trees. This successfully done, the first step towards a scenery is made. The next step in the improvement is the choice of the necessary roads and walks. We say necessary roads, because any road or walk which appears unnecessary to the eye of common sense, is a mere fanciful foolish thing in the garden. The object in view, or destiny of each road, should be plainly demonstrated; a sense of necessity must justify its presence. Objects along its line should, in like manner, explain its course, and no unnecessary bends nor crooks should show forth the gardener's desire to have a crooked road in the place of a flowing one. Artificially to hide the hand of art should be the great motto of landscape gardening. The nearer we follow this golden rule in the designing of roads the happier will be the final success of the entire improvement.

The same principle by which roads should be designed and be laid out, must be followed in regard to their bearing to the shape and surface of the ground. No road should appear as being cut out or filled up, but the terrace must justify its presence. On a level or smoothly rolling plain, this effect is naturally produced. On steep or broken ground considerable alterations of the surface often become necessary to bring forth the desired effect. For the general formation and grade of the ground no definite rules can be laid down. The improver's good judgment and taste alone can decide in how far it is advisable to altar or retain the natural shape. Easy flowing and rolling lines are in most cases far preferable to a flat or abruptly broken surface. In the case before us the ground had hitherto been a flat plain. After the improvement was finished it presented an entirely new appearance. This change was effected by very little labor and outlay, in filling up the center of each figure or part of the front lawn. The upper part of the premises being an unsightly, broken ravine, was, in like manner, converted into an easy flowing valley, adding an item of new interest to the general appearance of the place. A keen, watchful and experienced eye should be possessed by every landscape gardener, the use of which alone will enable him to conduct the work of grading and shaping the ground successfully.

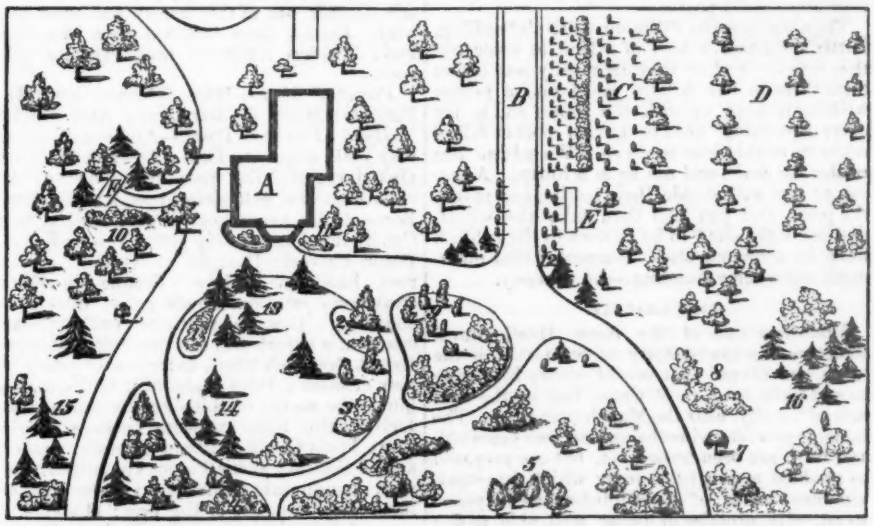
To branch out at this time on the rules and principles which should govern the work of planting and arranging the different groups and parts, of which the pleasure ground should consist, would lead me too far into the regions of scientific landscape gardening—a subject which cannot be treated in so short an article as the present one is designed to be. Suffice it to say, I am a firm believer in a systematic and distinctly contrasting arrangement, considering any and every indiscriminate hap-hazard mixture of trees, shrubs and flowers, scattered over a certain surface of ground, a senseless and unmeaning production, a base

counterfeit to the genuine design of landscape gardening. In conformity with this principle, the re-arranging of the shrubbery of the place in question was carried on. Regard had to be paid to some leading beautiful specimens of the pine family, which could not well be removed. As a general rule, however, each family of trees and shrubs had its place assigned to it. In this manner, the confusion of evergreens was soon divided into groups of White Pines, Hemlocks, Norways, Balsam Firs, etc. which, in years to come, will create that variety, harmony and contrast, which the former mixture would never have produced. The entire stock of ornamental shrubs was treated in precisely the same manner. The Altheas, Snowballs, Honeysuckles, etc. were collected in clumps, and those new formed masses united into several leading groups along the front of the grounds. By this arrangement they appear to the best advantage when seen from the house, and form a dividing belt between the lawn and public road.

Particular pains was taken in the formation of a Rosaro, or a place where the entire family of these queenly flowers is cultivated. Three leading groups around the junction of several walks are devoted to this purpose, the effect of which will undoubtedly be a happy one.

Lastly, it behooves me to say a few words on the distribution of flowers as far as they form a part of the general arrangement dictated by the art of landscape gardening. It is plain enough that they should be introduced in strict conformity with the whole natural scenery. They should appear principally in front of the groups of shrubbery, not as edging or a wreath, but according to the contour of the group—here in broader, there in smaller masses. In this manner they form a pleasing and appropriate change from the grass to the mass of foliage of the group. In some judiciously chosen spots they may appear in a mass by themselves, rising in bold relief in the midst of the verdant grass. To devote, however, the open spaces of the lawn to fanciful figures, &c. called pretty flower beds, is an evidence of a very doubtful taste. The genius of the landscape gardener can surely find an outlet in some other direction, and should never be exhausted in such follies.

My letter, however, is already more lengthy than I intended to make it. With your permission, I shall, at a future day, speak again of the progress which ornamental gardening is making. May I be able to report of a progress which is truly worthy of St. Louis and her wealthy population.



Description of the Grounds of Hon. Henry T. Blow, of St. Louis.

A. Mansion.
B. Grape Arbor.
C. Small Fruits.
D. Orchard.
E. Greenhouse.
F. Pavilion.
No. 1. & 2. Group of Bulbous Flowers.
3. Roses.
4. Ornamental Shrubbery.
5. Group of Larch and Deciduous Cypress.
6. Group of Lilac and Snowball.
No. 7. Weeping Ash and Weeping Mountain Ash.
8. Group of Shrubbery.
9. Group of Hemlock and Red Cedar.
10. Small Shrubs and Flowers.
11. Flowers.
12. Norway Spruce.
13. White Pines.
14. Balsam Fir.
15. Scotch Pine.
16. Arbor Vitæ and Junipers.

[Written for the Valley Farmer.]

HORTICULTURAL NOTES AND GLEANINGS.

BY CAREW SANDERS.

THE NEW STRAWBERRIES.

The year 1859 was prolific in new varieties of the strawberry; and Horticulturists all over the land will be anxiously looking forward to the season when some of the more vaunted varieties can be put to the test. Although those that are only sent out to the public this season, cannot be decided on till another, yet some idea will be had as to their right and title to the high claims that is put upon them by their admirers—those who have produced them.

First among them, as claiming more than all the rest, is "Downer's Prolific," which, in addition to possessing all the other qualities of a good strawberry, is said to produce *ten* times more than any other variety now cultivated We doubt—but suspend our opinion. Next comes Chorlton's Prolific, more modest in its pretensions, and more likely to come up to what is claimed for it; a little more moderate in its price, also; and its raiser has the reputation of knowing what a good fruit is, whether strawberry or grape; but whether it will prove better in all or any respect to varieties already in cultivation, time alone must prove.

Then we have the Fillmore, Austin's Seedling, Cutter's do. and a host of others to come out this season; and, as they are mostly sent out at from three to five dollars per dozen, a person wishing to keep up with the times, and to try every new thing, need to have a pocket full of rocks to enable him to do so. We advise our readers to wait, and not be in a hurry. A season or two will decide their merits, and reduce the price, and you can then take the wheat, and leave the chaff to be thrown to the rubbish heap by some one else. Remember that mammoth strawberry humbug—the Peabody.

FINE GRAPERY.

Doubtless one of the finest Horticultural structures in the vicinity of St. Louis, is the large, curvilinear span-roofed vinery belonging to and built by J. S. McCune, Esq. on the west side of the city, near the Manchester road. The house is new, the vines being now two years old, and have not been fruited yet, but are prepared to produce a crop next year; which the stout, vigorous canes of short-jointed, well-ripened wood, give promise of being well able to do; and under the skill of Mr. McCune's very excellent gardener, Mr. Read, we have no doubt but some of the best grapes ever produced in this vicinity, will be seen here in the future.

COLD SNAP—EARLY WINTER.

After an Indian summer of unusual splendor, and a week or two of wet, muddy weather, old winter turned in upon us with a suddenness and severity that fairly sets all our weather wisdom at defiance.

Wednesday, November, 30th, was exceedingly warm all day and evening—oppressively so. But during the night the weather changed, and it froze, and snowed and blowed awfully; and old winter's reign had fairly commenced, and up to this time, December 24th, he has not relaxed his hold in the least, except slightly a few hours at a time.

On the morning of the 7th December, the thermometer indicated 16° below zero at sunrise, and may have been lower during the night or early morning. We notice the inner bark of the peach and cherry trees is discolored—turned to a light brown. We fear the worst for the fruit buds of the peach and other tender fruits.

INDISPENSABLE ROSES.

As roses are indispensable to the flower garden, so are certain varieties indispensable to a good collection. The *Country Gentleman* gives such a list; and, although most of them are comparatively new varieties, and may not be best on that account alone, yet we take it for granted that they are valuable varieties from the writer's endorsement of them. Still there are many old varieties that are, or ought to be, known to every amateur rose-grower, that we consider indispensable, and cannot be left out or thrown away. We confine ourselves to the *Country Gentleman's* list:

Moss.—Barronne de Wassenaer, deep rose, very large and double; Comtesse de Murinaise, blush white, changing; Crested, pale, rosy pink, distinct; Glory des Mosses, pale rose, outer petals whitish, one of the largest and most beautiful; Laneii, deep brilliant rose, handsome bud; Princess Adelaide, rose, vigorous pillar rose.

Perpetual Moss.—Mme. Edouard Ory; Mme. Ponctue; Marie de Burgoyne; Abel Carriere.

Hybrid Perpetual Roses.—Alphonsa Kerr, soft rosy pink, exquisite form; Augusta Mie glossy pink, large globular rose, free growing; Adelaide Fontaine, pale glossy rose, a noble flower; Baron de Heckeren, rosy pink, beautiful buds; Col. de Rougemont, deep glossy rose, superior to Baron Prevost; Duchess of Norfolk, carmine rose, handsome foliage; Eveque de Nimes, strawberry crimson, superb color, distinct and charming; Gen. Jacquimenot, brilliant scarlet crimson, a superb and glowing color; Glorie de Lyons, deep rich plum, outer row of petals velvety crimson; Jules Margottin, brilliant glossy pink—the merits of this rose are unsurpassed; Lælia, satin rose, exquisite form—a glorious rose; Louis Chaix, brilliant crimson, rivals Giant of Battles; Louis Peyronny, bright glossy rose, magnificent; Madame de Cambaceres, brilliant deep rose, one of the best; Madame Domage, bright cherry, superb; Madame Wasson, reddish crimson and purple, flowers profuse; Madame Vidot, pale flesh, beautiful shape; Mathurin Regnier, blush pink, like Wm. Griffiths; Mrs. Rivers, satin flesh, cupped petals; Paul Dupuy, deep velvety crimson shades, this rose is unequalled in autumn; Prince Leon, rich rosy crimson, beautiful as a Camelia; Rebecca, deep crimson, mottled with rich purple, finely formed, of good substance— a great addition; Souvenir de la Reine de Angelterre, brilliant rosy pink, monstrous; Triumph de L' Exposition, very crimson, fine; Victor Trouillard, deep rich crimson, suffused with purple, splendid.

Bourbons.—Dr. Laprostre, deep vivid crimson;

splendid. Louis Odier, rosy pink. Mme. Angelina, cream, fawn centre; exquisite. Hermosa. Souvenir de la Malmaison, blush centre, clear flesh. Marquis de Balbiano, bright rose, very fine.

Tea Scented Roses.—Comtesse de Labartha, exquisitely beautiful. Bougere, bronzed rose, beautiful buds. Glorie de Dijon, buff, with orange centre; the most superb of Tea Roses. Eliza Savage, pale yellow, beautiful buds. Mme. Brevay, cream centre, blush. Mme. Willermoz, creamy white, centre fawn; a perfect gem. Sombreuil, pale straw, large double and fine. Souvenir de L'Eliza, cream, centre pinkish fawn; petals shell shaped; magnificent. Vicomtesse de Cazes, yellow; centre copperish yellow.

Noisette Roses.—Augusta, sulphur yellow. Fellemburg, bright rosy crimson; hardy and fine. Lamarque, Mme. Massot, Triumph de Rennes, exquisite; Mme. Schultz.

RENOVATING ORCHARDS.

The *Gardeners' Monthly* says: "Established orchards, on thin or impoverished soil, may be renovated in the following manner: If a tree has been planted, say fifteen years, and attained the size we might expect in that time, get, say ten feet from the trunk, and dig a circle two feet deep all around it, and fill in with a good compost; the effect the next season will be quite marked. If the tree is older or younger, the distance to start with the circle from the trunk, will of course be proportionate. A top dressing will also be of great assistance, as well as a vigorous pruning out of all weak or stunted branches. Moss and old bark should also be scraped off, and if the trunk and main branches can be washed with a mixture of sulpher and soft soap, much advantage will follow.

"Old decayed bark on fruit trees is always a sign of a want of vigor. When a tree is growing thriftily it cracks this old bark so freely, as to make it easily fall off; but when the tree is weak and enfeebled, the bark often becomes indurated before it has got cracked, and in this state the tree becomes what gardeners call 'hide bound,' and artificial means must be afforded to aid the tree to recover.

In the cherry and plum trees this is easily done, by making longitudinal incisions, through the bark with a sharp knife. In the peach and apricot also, I have employed this process with advantage, in spite of learned theories, which have attempted to show up the absurdity of the practice."

SIMPLE WAY TO KEEP CABBAGE.

We have arrived at the conclusion that many of the elaborate and laborious plans recommended and practiced to preserve cabbage during the winter, are not only unnecessary, but actually wrong in principle, as well as practice. Being satisfied that more is lost by decay, by large masses of green succulent vegetable matter, piled up together, causing fermentation, dampness and decay, than there is from actual frost. Cabbage is a hardy vegetable and may be frozen solid with impunity, provided the frost is drawn out again by the soil. It is the frequent freezing through and thawing out in the sun, that bleaches and destroys every particle of green leaf, when standing as they grew; a very slight protection from this thawing is sufficient to preserve them.

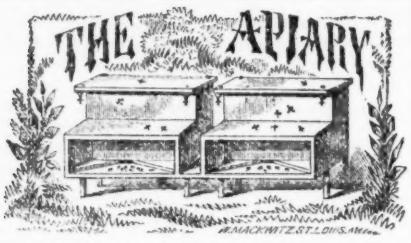
We adopted to a limited extent last season, and much more largely this, the following plan, which up to the present answers all our expectations. The cabbage may be left standing as long as there is any signs of growing, even to the first hard frost, if necessary. Then, when you want to take them up, go along each row, and thrust the spade under the roots of each, and throw it out on one side, making a hole like a hen's nest by so doing, which may be finished by a twirl or two with the spade. Then take hold of the stalk near the root and turn it over into the hole, head downwards; of course the large outside leaves will cover the outside of the hole all round, and will effectually shed off the rain and receive the thawing and freezing, leaving the head unharmed. We have found that where the lower leaves are destroyed, on turning them over—in a frost or not—the head of the cabbage is soft, green, fresh and dripping, as if with dew, and presenting a fine marketable appearance.

It would, doubtless, be more effectual if a slight covering of some sort be placed over the exposed part, especially for the North, where the frosts are more severe. This may be done by standing them as thick as possible in a row, and plowing a furrow over them on each side, or if wanted during winter frosts, a slight covering of straw or other litter may be laid along and r moved at any time when wanted.

Illustrated Annual Register of Rural Affairs.—We have received from the publishers this very valuable Annual for 1860. It is a work of 144 pages, containing, besides the almanac, a great variety of useful matter relating to farming, fruit and ornamental gardening, building; indeed, almost every subject of interest in rural life; illustrated with numerous engravings. Price 25 cents, sent by mail free of postage. Luther Tucker & Son, Publishers, Albany, New York.

The publishers have also made up two neat volumes, each containing three numbers of the *Annual Register*, with 888 engravings, embracing the years 1855 to 1860, inclusive, which may be regarded as a miniature encyclopedia of rural affairs, containing more real valuable matter than can be found in any other volumes of equal size, with which we are acquainted. Price $1 50 in paper covers, $2 00 full bound. Address as above.

New Grafting Wax.—Take two ounces of common rosin, melt it slow over a fire, being careful not to heat it so much as to make it throw off its spirit of turpentine. When it becomes clear as syrup, add a little less than one ounce of alcohol, and mix well and put in a bottle at once and cork tight. Alcohol is to be added sufficient to make the mixture liquid and keep it so, and when applied to trees it hardens at once and forms an air-tight covering.



Culture of the Honey-Bee: Langstroth's Movable Comb-Hive.

Of all the insect tribes, there are none more interesting than the honey-bee; and it is a gratifying fact, that as man becomes enlightened in regard to their habits, they become objects of more universal interest. Bees, undoubtedly, were created in order to contribute to the happiness of mankind, and hence their peculiar habits and instincts, and their remarkable industry.

Within the last twenty years, hundreds of patents have been granted in the United States for alleged improvements in bee-hives; which, with a few exceptions, have deceived their inventors, or the public, and have proved worse than worthless. We have a few apiarians in this country, who have devoted a lifetime to the study of the nature and habits of the bee. In the artificial management of their bee colonies, and in their efforts to aid the bee in its labors of storing honey, and in protecting it from its enemies, they have endeavored to make their inventions accord with the wants and habits of the insect, rather than to attempt to force it to conform to inventions that were repulsive to its nature, as many have done. The failure of most of these has brought many of the patent bee palaces and hives, and alleged remedies for the bee moth, into disrepute, and with thousands of other patented contrivances have been cast aside as worthless.

Among the most successful apiarians, and writers upon bee culture in the United States, are Mr. M. Quimby and the Rev. L. L. Langstroth. Mr. Quimby has made the culture of bees almost an exclusive business for nearly thirty years; and we know of no one whose success has equaled his. In the first editions of his "*Mysteries of Bee Keeping Explained*," the reader will observe that his aim was to make the protection of the bee conform as nearly as possible to the known habits of the insect. It will be seen that within the last twenty years, he has tried most of the new inventions relating to bee keeping, all of which he has thrown aside as worthless, until he made trial of the patent movable comb-hive introduced by Mr. Langstroth. A valuable work on the "*Hive and Honey Bee*," and the use of the movable frames, by the inventor, Mr Langstroth—and the "*Mysteries of Bee Keeping Explained*," with an appendix illustrating this invention, by Mr. Quimby—may be had at the Agricultural bookstores. This invention, while it in no way interferes with the economy and working of the bees, enables the keeper, at all times, to have access to any part of the combs, for any purposes that may be desired.

The form of the hive for these frames, does not differ materially from the ordinary box hive. The size employed by Mr. Langstroth, is somewhat larger than that formerly recommended by Mr. Quimby. The size recommended, is about eighteen inches from front to rear, fourteen inches from side to side, and ten inches deep. The movable frames are made by simply nailing strips or laths upon end pieces of suitable width and thickness, and forming a frame like the outside of a common window sash. These are suspended side by side in the hive, with a small space between them; into these the bees attach their comb; the object being to confine each comb to a single frame, so that any one frame may be withdrawn at any time, for any purpose that may be required. There are many advantages resulting from this arrangement which it would occupy much space to enumerate, which those familiar with bee-keeping may readily see. We may, however, mention a few. With the movable frame the haunts of the moth may be readily detected and broken up; a queen may be furnished from another hive, in case of accident or death of the resident queen; brood comb may be changed; empty comb supplied; surplus honey taken; artificial swarming may be readily and safely performed; besides in various ways reducing the labor of the care and management of bees; insuring the success, and increasing the profits.

We have a widely extended country, admirably adapted to extensive bee culture; and with the information that may be derived from the works of either of the authors we have named, any person within the rural districts may derive profit, instruction and amusement, by keeping a few hives of bees. We need not confine them even to the rural districts; for, in many of our most populous cities, clergymen, and other gentlemen of refined taste, find pleasure in observing the workings of this industrious insect.

With the light of modern experience, we are glad that the barbarous practice once common in bee-keeping, of "taking up honey" and destroying the bees, is about done away with; and that any one may keep bees understandingly and with profit, and allow them to multiply without limit according to their natural habits.

Domestic Department.

[Written for the Valley Farmer.]

CORN BREAD.

"Teach a *Western* housekeeper to make corn cake!" I seem to hear some thrifty matron exclaim, as the 'gudeman' essays to read aloud the column of recipes in his new *Valley Farmer*. But, my dear madam, do you never find it difficult to make a *good* article in the absence of sour milk? Many people do not know, that by mixing two teaspoonsfull of cream of Tartar with a quart of fine white meal, and adding, with sufficient lukewarm water to reduce it to a moderately thin batter, one teaspoonfull of pulverized soda, two tablespoonsfull of lard, two beaten eggs, and a little salt, a better cake can be made than by means of sour milk and saleratus. Bake in *well*-oiled tins, or, as many prefer, in the time-honored skillet.

BUCKWHEAT CAKES.

"Can't eat them!" Ah! but try them made plainer—leave out all the cream and rich milk, and mix them after this manner, and they will not disturb the stomach of the most confirmed dyspeptic:

Four cups of buckwheat flour, *five* of water, two tablespoonsfull of good hop yeast. Set them to rise in a warm place over night, add a little salt before baking; and, with a cup of good coffee, fresh butter, and honey or syrup, you have a breakfast fit for a king.

Much depends upon *baking*. Have a quick fire; and, if the cakes are sufficiently light, they will be ready to turn as soon as they are well located upon the griddle. Leave a cup of the batter to start again with; and, after the first morning, add a teaspoonfull or so of soda.

BEEF SOUP,

Is an excellent dish for cold weather. Pour over two pounds of meat (with or without a marrow-bone) six quarts of cold water; place it over a moderate fire; let it boil two hours; add three sliced potatoes, a turnip, half a cabbage head, cut fine; a sliced carrot and an onion. Just before taking up, crumb in a slice of bread, add salt and pepper, a little cayenne, or a bit of red pepper and a trifle of summer savory. If your beef is very fat, or if it contains a marrow-bone, the broth should be allowed to cool, in order to remove the fat, or else it will be too rich for any stomach.

AN EXCELLENT LOAF OF CAKE,

May be made for the farmer's tea-table, by mixing half a cup of butter with a cup of sugar, and adding a cup and a half of sour milk (or sweet if you prefer, by mixing two teaspoonsfull of cream tartar with your flour,) half a cup of raisins, three cups of sifted flour, and a teaspoonfull of soda. This cake recommends itself when eggs are scarce.

NELLIE.

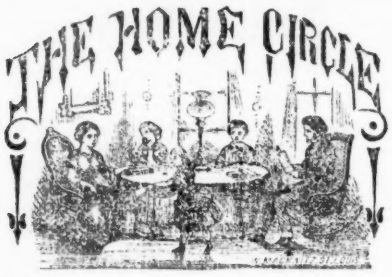
St. Louis County, Dec. 20th, '59.

Poultry Yard.

THE POULTRY TRADE.

In no branch of our domestic markets has there been a greater increase and improvement, in cities, than in that of poultry. This results, chiefly from the facilities afforded by speedy transportation, and the establishment of the express companies for all parts of the country, which in cool weather will transport fresh poultry to market from the most distant States in perfect order, when the dressing and packing has been properly performed. In the larger cities the increase in the poultry trade has been most marked. For instance, in the city of New York the quantity of poultry that arrived in one week, from the 20th to the 27th of December last, is estimated at 350 tuns, or an average of 50 tuns a-day. From Monday to Friday of that week, the American Express Company delivered twenty-eight car loads, containing five tuns to the car, chiefly poultry. The remainder of this immense store, for the supply of Christmas week, came by other established express lines, by boats, and country wagons.

An important feature in the poultry trade, has been established by several enterprising firms, for the supply of the New York market, which is worthy of imitation for the supply of the city markets of the West. We allude to the establishment of "poultry factories" at convenient and central points in the interior There are several of these poultry fattening and packing establishments in New York; one in Aurora, two in Chautauque county, and others in Ohio. It is estimated that each of these factories will furnish fifteen tuns of poultry for the city market of New York. A large number of men and teams are employed in collecting these birds; which are brought in alive, and if not fat are fed till they are and rendered fit for market. They are then dressed and packed in the most approved manner, and sent by express to market, where they readily command several cents more per pound than much of the country-dressed poultry that is brought to market by the farmers and hucksters generally. Poultry in our markets is generally sold by the piece or dozen at prices sometimes according to size and quality. In passing through the market, we see parcels of chickens that are mere skeletons covered with skin, entirely unfit to eat; and poultry of this character is not unfrequently met with. This is sometimes sold by those who raise it; but more generally it is bought up in the country, and sold by hucksters. If the custom of selling poultry by the pound was established, it would come to market in much better condition. It is a great waste, after raising fowls to maturity, to bring them to market so poor as not to reach more than half weight. With our present railroad facilities, "poultry factories," similar to those we have spoken of in New York and Ohio, might be established in the country, for the supply of our Western city markets, to good advantage to the proprietors, as well as to the infinite benefit of consumers.



THE NEW YEAR.

A happy New Year to the households of all our friends. A happy New Year to all our readers. A happy New Year to our great West, and great country. A successful New Year to all improvements, all good inventions and enterprises; a prosperous New Year to schools and churches, to good newspapers and associations, to whatever promotes the true interests of society. This is our greeting of to-day. But while we make it in the heartiest good will and the best faith, we feel sure that our readers and all people will be happy in the best sense, only as they deserve it, only as they do well, live wisely and act nobly their part in life. Households will be happy only as they observe the great law of home love and duty, only as they keep their homes free from vice, ill-temper and self-will, and fill them with generous feelings and noble deeds. Our country will be prosperous only in proportion as it is righteous and faithful to its great principles of freedom and human good.

To wish for happiness is well; but to go about being happy, in feeling right and doing well, is the best thing. Many men wish to be rich who never do the first thing to secure riches in the legitimate way. These turn out to be our shabbiest men. Many wish to be scholars who never muster courage or patience fully to master a single science. These are our pedants, empirics, quacks, lions in the ass-skin. Many wish to be Christians, who never give up a worldly desire, conquer a passion, or sacrifice a wish or a dollar to the principle of good will and good deeds. These are our would-be's—often our pretenders and hypocrites.

All intellectual, moral and social good comes by good endeavors and right actions. Happiness is the result of such good—the pleasant fragrance of a good heart, a sweet disposition, a noble life. To be happy one must be good. A year of happiness, therefore, implies a year of goodness; a wish for happiness implies a wish for goodness. We close, therefore, with a good New Year to all our friends.

A Word to the Whole Family.

Friends of domestic and agricultural improvement, we appeal to you in behalf of the farmer's profession and family. You are scattered over a vast region, the richest and grandest ever tilled by human hands; you live in a country the freest and best ever governed by men; you exist in an age the most intelligent, virtuous, practical and progressive known in the history of humanity. Other professions are making rapid strides in wealth, culture and practical advancement. Yours is the noblest of all; divinely appointed; the one on which all others subsist; yet how little, compared with the merits of your calling, are you doing to advance the real interests of your business and families. Other professions being in towns and cities can improve by means of associations, mutual and daily intercourse, and such instrumentalities as towns and cities always afford. But you have but one means of improvement outside of yourselves, that is your literature, your books and papers. This is your great hope. Your papers, especially, bring you the improvements, experiments, implements, products, breeds, fruits and everything pertaining to your profession, in-doors and out. You get a knowledge of every discovery in agricultural implements, in stocks, in seeds, in the processes of farming, as soon as made, through your journals. They are devoted to your interests, they are your advocates, they speak for you, they are your true and tried friends; they are more, they are the friends of all the true interests of the country. The question now is, what will you do for them? Will you sustain them? Will you join hands in fast and faithful friendship with the *Valley Farmer;* and support it, enlarge its list of subscribers, and carry its benefits to all the farms and homes of the country? You have many neighbors who do not take it; you have friends and relatives into whose homes it does not go; you, many of you, know of whole neighborhoods which it does not visit:—you can carry it to many of these places on its errand of improvement; will you do it? Will you thus be true to yourselves, your homes, your profession and one of the best friends of your profession?

We make this appeal in confidence. We believe the farmers, generally, know where their interests lie. We hope to hear from many thousands within this month, enclosing long lists of new subscribers. We hope to greet a

host of new friends by the aid of our old patrons. We hope this will be regarded everywhere as a family matter, and men, women and children will help extend the *Valley Farmer's* influence, and thus benefit the farms and homes of the people. *

DON'T NEGLECT.

Do not neglect—what? Why that stitch that is broken in the heel of your stocking; that seam that has started in your husband's coat; that little rent in your child's frock; that peep-hole in the elbow of your boy's spencer; that stitch that is broken, wherever it is found. "A stitch in time saves nine." "An ounce of prevention is better than a pound of cure." A destitute boy had given him a pair of new shoes. In a day or two the strings broke. He carelessly failed to replace or repair them. In two weeks the shoes were ruined, which ought to have lasted him six months, and all for the neglect of keeping them tied. Was not this the characteristic of the lad which made him so poor?

A neighbor of mine bought a new harness. In a few weeks a stitch broke here; a little longer, and a strap gave way there; soon a buckle failed. One place he tied up with a string; another was taggled with a wire; another was left. By and by one of his strings gave way at a critical time; his horse took fright; his buggy was badly broken, his harness nearly ruined, himself hurt; and all for the neglect to keep his harness in repair. I know a woman who seldom mends anything. She generally has a ragged family, and heavy bills. I know a poor widow who keeps a large family always trim and tidy on a very small income. She is a vigilant watcher of the little things. She never lets a button come off, or a button hole break. She puts in a stitch just before the deed is done. I know another woman, in easy circumstances, whose carpets never get dirty, and her furniture seldom jammed. She keeps her eyes open to the little liabilities of both. If a crumb is dropped, she picks it up before it is trod in. If a grease spot is made, she has it washed out at once. If one comes in with dirty feet she is on their track. She attends at once to all the little soilings; and so her house seems never to get dirty or out of order. Our great losses are from little rents and breaks. A sharp eye to the stitches, will save an immense amount of time, money and patience. *

COOKING.

Cooking is both a science and an art. Now don't stand aghast at this remark. I don't mean to say that it requires a Solomon of science, or a Raphael of art. But I do mean to say that there may be science and art in the kitchen, without any body's thinking of it. To know how to cook well is a science. To know how to cook economically is an art. Making money is an art. Now, is there not more money made and lost in the kitchen than almost anywhere else? Does not many a hard-working man have his substance wasted in the kitchen? Does not many a shiftless man have his substance saved in the kitchen? A careless cook can waste as much as one man can earn, which might as well be saved. It is not what we earn, so much as what we save, that makes us well off. Saving is a more difficult art than earning. Some people put dimes into pies and puddings where others only put in cents; and the cent dishes are best and healthiest. Many a stupid woman can cook a relishable meal of victuals, if she has an abundance of good things with which to do it. But to cook well out of a little, and well from a scant larder is a real art. This is a great accomplishment; for, while it will save money, it will save health; and while it will save both money and health, it will save both patience and love. Many a husband loses his love with his money. Love often runs out at the same place where money does. Some women wear out their husband's love on their backs and heads; others cook it out in the kitchen; others travel it out. It goes some way very often with the waste of money. While, therefore, I plead for economy in the culinary art for the health and prosperity of the household, I do it also for domestic love. Oh, all ye matrons, young and old, rich and poor, learn to practice the art of cooking much with a little; so will you study the interests of your household, and save much to feed the fires of conjugal love. *

If you open the lower sash of a window, there is more draught than if you open the upper sash. Explain the reason of this. If the lower sash be open, cold, external air will rush freely into the room, and cause a great draught inward, but if the upper sash be opened, the heated air of the room will rush out, and, of course, there will be less draught inward.

Why is rain-water soft? Because it is not impregnated with earth and minerals.

Editor's Table.

Terms of Advertising.

One Page 1 month $15 00, and each month thereafter $12 00.

Half Page 1 month $8 00, and each month thereafter $7 00.

One square, of ten lines, 1 month $2 00, and for one year $18 00.

Terms of Subscription.

One Copy, one year, - - - - - $1 00
Six Copies, " - - - - - - 5 00
Ten or more copies, one year, each, - - 80
And one copy, one year, free, to any person sending 15 or more names at 80 cents.

Persons residing in Missouri and contiguous States, will address VALLEY FARMER,
97 Chesnut street, St. Louis, Mo.

Persons residing in Kentucky and contiguous States will address VALLEY FARMER
99 Third street, Louisville, Ky.

Special Premiums.

In addition to our large list of Premiums, amounting to over SEVEN HUNDRED Dollars, we now offer for the benefit of our lady readers the following SPECIAL premiums, viz:

1st. To any person who will send us six subscribers to the "Valley Farmer," and six dollars, we will send for one year PETERSON'S LADIES' MAGAZINE, published by C. J. Peterson, Philadelphia, at $2 00 per annum, or the LADIES' HOME MAGAZINE, published by T. S. Arthur & Co. Philadelphia, at $2 00 per annum. For twelve subscribers to the "Farmer" and $12 00, we will send both of the above Magazines for one year to any address.

2d. To any person who will send us ten subscribers to the "Valley Farmer," for one year, and ten dollars, we will send GODEY'S LADY'S BOOK for 1860, published by L. A. Godey, Philadelphia, at $3 00 per annum.

3d. For twenty subscribers to the "Farmer," for one year, and twenty dollars, we will send to any address all of the above Magazines for 1860.

We do not believe we have a single reader but who could, with a little exertion, obtain one or all of the above premiums.

POSTAGE ON THE VALLEY FARMER.—A subscriber writes us that the postmaster at the office at which he receives his paper charges him twenty-six cents a year postage on the "Valley Farmer," and asks us if this is right? We have stated several times that the postage on the "Valley Farmer" was but SIX CENTS A YEAR, paid quarterly in advance. Any postmaster by referring to the postage law will see that he can charge but SIX CENTS PER YEAR on monthly journals of the size of the "Valley Farmer." We hope we shall not be compelled by a repetition of the offense to report the said P. M. to the P. O. department at Washington.

How to Help Us.

A great many of our readers in renewing their subscriptions state that they will cheerfully do all in their power to aid us in increasing the number of our subscribers. We will suggest a few ways in which they can accomplish this object.

1st. Show a copy of the VALLEY FARMER to such of your acquaintances as are not subscribers, inform them it is published at the low price of one dollar a year, and then tell them what you think of it. Call their attention to its various departments, and to the valuable articles which appear in them. If you have not got time to do this, try to get one good, efficient, man in each neighborhood to do it.

2nd. Endeavor to get postmasters interested. They see and know everybody, and if they try, can get any number of subscribers. Tell them the VALLEY FARMER is a good work and that they ought to help it

3d. Send us the names of such persons as you cannot see, with their postoffice addresses, and we will send them a copy of our journal for their inspection.

4th. If you wish to make some friend or relative a present for the new year, order the VALLEY FARMER for him. It will be an interesting visitor for the next twelve months. Many of our readers do this annually, and such a present is always appreciated.

BRAZILIAN POTATOES.—We acknowledge the receipt of a couple of Brazilian potatoes from our friend John Sappington, Esq. He obtained one potatoe from a gentleman from Brazil, and from that single potatoe raised over eighty pounds. The quality is excellent and if it proves to be what it now promises, we shall take great pleasure in bringing it prominently before the public. We have an article from Mr. S. on potatoe culture which will appear in our next No. Mr S. is one of the best farmers in Missouri.

MERAMEC HORTICULTURAL SOCIETY.—We are informed by Mr. Muir, the accomplished Secretary of this Society, that the next meeting will be held in the School House at Allenton on the first Thursday of January, when an inaugural address will be delivered by Dr. A. W. McPherson who we are glad to hear has been re-elected President of this young and energetic Society. We hope there will be a large attendance and we have no doubt that all will be well paid for attending by listening to an interesting address by the President, who has from the first taken a deep interest in the Society, and has done all in his power to promote its success.

DEATH OF YOUNG BARNTON.—The noble, thoroughbred stallion, "Young Barnton," owned by the Illinois Stock Importing Company, died of lock-jaw, on the farm of John Crowder, in Sangamon county, Ill. last Saturday. He was bought in England, in 1857, at a cost of $7,000, and was considered the finest horse in Illinois, and one of the finest in the United States. He was exhibited at our Fair Grounds last September.

To Officers of Agricultural Societies.

As this is the season of the year that premium lists are being made, and premiums selected for the Fairs for 1860, it is now an opportune time for us to take you by the arm, and have a friendly chat with you. We believe that you want to do all that you can to advance the cause of Agricultural improvement, or you would not have been chosen officers and would not so cheerfully and ardently labor for the success of your annual exhibitions.

You must be aware that the circulation of a good Agricultural journal among the farmers of your county would do more to bring about improvment in farming, more to introduce new and valuable breeds of stock, more to elevate the noble profession of agriculture; a profession which such men as Washington, Jefferson, Webster and Clay have belonged to, and honored by their noble virtues; than anything else.

You are empowered to select premiums to be offered, and we conceive it to be your duty to select such as you believe will confer most real benefit—such as will be most valuable. This being admitted, we ask you if you can offer a premium to the farmer which for its price will be worth as much as the VALLEY FARMER, a journal devoted especially to the interests of Western farmers. It makes its regular monthly visits throughout the year with a bright face and full of such intelligence as the farmer most needs.

You may think if this journal is so valuable, to the farmer, every one ought of his own accord to subscribe for it—and so he ought, and does too as soon as he becomes acquainted with its merits. Out of the many thousands of subscribers that we have on our books we do not believe that there are fifty, if half of that number who will fail to renew their subscriptions for the present year; they have tried the paper, been pleased with it, and say they would not do without it for double its price. But farmers unacquainted with its merits are slow to subscribe. Offer it, however, as a premium, let them read it for one year, and ever after we can count them as subscribers, for they learn its worth. Not one farmer in ten, in any county in the West, is now taking it, that should be. You can aid us in obtaining more readers in your respective counties, and confer a greater benefit than by offering other premiums. The societies of other States do this. Many societies offer two or three hundred copies of agricultural journals. They in this way aid Agricultural publishers in circulating their papers among the very men who most need them.

Now as to the best plan to offer the FARMER as a premium, we suggest that it should be offered in connection with the other premiums; for instance, for the best cow, eight dollars and the VALLEY FARMER for one year. Or for the Best Bull a silver cup worth twelve dollars and the VALLEY FARMER for one year, and so with all the premiums. By this means every successful competitor gets a good work devoted to his own profession for one year, and another premium. We believe the farmers who are acquainted with the merits of our paper would sanction our suggestions, to a man. You have it in your power to follow our suggestions. Every reason can be urged for your adopting them, and we can conceive of none that can be offered against them. We shall await with much interest the action you may take in the premises.

ILLINOIS STATE HORTICULTURAL SOCIETY. — We have received from the efficient President, C. R. Overman, Esq., a circular, stating the arrangements that have been made for the fourth annual meeting of this society, which will be held at Bloomington, commencing on the 10th day of January, and continuing four days.

The following gentlemen are announced to deliver Lectures or Essays, on the following subjects, viz:

Dr. John A. Warder, of Cincinnati, on "Vegetable Physiology." Dr. B. Walsh, of Rock Island, on "Insects injurious to Fruits and Fruit Trees." Norman J. Colman, of St. Louis, on "The Culture of the Small Fruits." Prof. C. D. Wilber, of Aurora, on "The Prairies and Prairie Soil." C. T. Chase, of Chicago, on "The Elevating Influence of Horticulture." M. G. Kern, of Alton, on "Landscape Gardening." Mr. C. Thomas, of Murphrysboro, on "The Climate and Soil of Southern Illinois, and its adaptation to Fruit Culture."

This is an important Society to the farmers of Illinois, and should be largely attended. Any one at all interested in Fruit Culture, would be well paid for attending by the increased knowledge and experience he would derive.

Planting Apple Seed---Pruning Trees, &c. &c.

"A Reader" of the "Valley Farmer," at Ewing, Ill. wishes to be informed the best time to plant apple seeds, and when is the best time to prune trees. Also, where some good kinds of strawberry plants can be had. Answers to the above questions would have appeared in an earlier number of the "Valley Farmer," but from the fact that by accident his letter failed to reach us until the last moment of making up the matter for the present number.

Apple seeds may be planted any time after they are secured in the fall until spring. We prefer to wash out the seed from the pomace immediately after the cider is made, and before they have time to ferment. Then spread the seed in boxes to dry, and the first open weather after February, they may be planted; and it will answer to delay the planting until the last of March, but in this event the seed should be mixed with wet sand as early as February, and remain in the boxes, out of doors, and kept from fowls and mice until planted, taking care to have them kept moist, and to avoid too much wet. The boxes should be supplied with holes in the bottom to afford drainage.

Trees should always be cut back well and pruned when transplanted from the nursery, leaving only the necessary branches to form an open head, and these branches should each be cut back to three or four buds.

Pruning, in the future, may be done at any time during the growing season, when it is discovered that any branch is putting out where one is not needed; and others should be shortened where it is required to af-

ford a handsome balanced head. If attended to in this manner, but little pruning will be required at any one time, and it may be done in this manner without that injury to growth which results from HEAVY fall or spring pruning, which must destroy the natural balance between the root and the branches.

Plants of the best varieties of the strawberry may be had of Carew Sanders & Co. of the St. Louis Nursery, or probably of other nurserymen nearer home.

RENEWALS.—We sincerely thank our friends for the promptness with which they are renewing their subscriptions and for sending the names of so many new subscribers. There is scarcely a renewal of a single subscription without being accompanied by one or more new subscribers. From present indications our list will be much more than doubled this year. But we have room on our books for all the farmers of the West, and hope our friends will continue the good work until the Valley Farmer shall be a regular visitor to every farm home in the Great Valley. Now is the time to form clubs.

Course on Agriculture at Yale College.

The following courses of lectures are to be delivered during the month of February, 1860:

FIRST WEEK—SCIENCE IN ITS RELATIONS TO AGRICULTURE.

Chemistry—Prof. S. W. JOHNSON.
Meteorology—Prof. B. SILLIMAN, Jr.
Entomology—Dr. ASA FITCH.
Vegetable Physiology—DANIEL C. EATON, Esq.

SECOND WEEK—HORTICULTURE.

Pomology in General—Hon. M. P. WILDER.
Grapes—Dr. C. W. GRANT.
Berries—R. G. Pardee, Esq.
Fruit Trees—P. BARRY, Esq.
Fruits as Farm Crops—LEWIS F. ALLEN, Esq.
Agricultural Chemistry—Prof. S. W. JOHNSON.

THIRD WEEK—AGRICULTURE PROPER.

Drainage—Hon. HENRY F. FRENCH.
Grasses and Irrigation—J. STANTON GOULD, Esq.
Cereals—JOSEPH HARRIS, Esq.
Hops, Tobacco, &c.—Prof. WM. H. BREWER.
Cultivation of Light Soils—LEVI BARTLETT, Esq.
English Agriculture—LUTHER H. TUCKER, Esq.
Agricultural Education—Prof. JOHN A. PORTER.

FOURTH WEEK—DOMESTIC ANIMALS.

Principles of Stock Breeding—HON. CASSIUS M. CLAY.
Stock Breeding in U. S.—LEWIS F. ALLEN, Esq.
Breeding for the Dairy—CHAS. L. FLINT, Esq.
Horses—SANFORD HOWARD, Esq.
Root Crops and Sheep Husbandry—THEO. S. GOLD, Esq.
Pisciculture—Dr. J. C. COMSTOCK.
Rural Economy—DONALD G. MITCHELL, Esq.

Many other experienced Agriculturists and Horticulturists, besides those included in the list of lecturers, will be present and take part in the discussions, which will form an important feature of the Course.

The number of lectures on the above subjects, will average three to each subject. The Course will commence Feb. 1. For a detailed programme, including subjects not above specified, application may be made to Prof. JOHN A. PORTER, New Haven, Ct.

TRAVELING AGENTS.—In answer to several inquiries whether traveling agents will be permitted to compete for our premiums we say they will not. These Premiums are intended exclusively for farmers or local agents who will interest themselves in forming clubs. The names may be sent for different Post Offices. It is no more trouble to mail to one Post Office than to another. The lists may be added to up to the first of April at club rates. We have offered nearly double the number of premiums, this year, that we did last, so that a larger number of persons could be benefited by them. We hope our readers will earnestly endeavor to take these premiums. Let a vigorous effort be made for them.

TO CORRESPONDENTS AND SUBSCRIBERS.—The Louisville Editor of the "Valley Farmer," after an absence of some weeks among the farmers in various sections of the country, is again at his post, and may be addressed during the winter at Louisville, Ky. Several enquiries from correspondents will be answered in our next and subsequent numbers of the "Valley Farmer."

Any numbers of the "Valley Farmer" that may have failed to reach subscribers during the past year will be forwarded on notice being given, addressed to "Valley Farmer," Louisville, Ky.

DEATH OF A GOOD MAN.—The papers of Western New York announce to us the death of David Thomas, at his residence at Union Springs, Cayuga county, N. Y. at the advanced age of 84 years.

Few men have lived to a better purpose than Mr. Thomas. In the early part of his life he was the friend and associate of De Witt Clinton, and engaged with him in that gigantic undertaking, the construction of the Erie Canal, and by him was appointed Chief Engineer of a portion of that work. Subsequent to this period he devoted himself to rural pursuits and was distinguished as one of the most clear and practical writers upon agriculture, botany, pomology, &c. He also received the distinction of being appointed honorary member of several horticultural societies in Europe. We knew him well, and there were few men living for whom we had a higher regard. He was a true Christian—an honor to the society of Friends (Orthodox), of which he was a member, and to mankind.

SHAW'S POINT, Ill. Nov. 12th, 1859.

DEAR EDITOR:—Will some of your correspondents inform me, through the "Valley Farmer," where the Bremen Geese can be had, or some of the eggs, in season for setting. Also, the White Topnot Duck and White Shanghai Chickens—all of them of pure blood.

CHAS. RAYMOND.

ITALIAN BEES.—Several attempts have been made to introduce from Europe the Italian bee, but for want of care, or some accident, these attempts have proved fruitless, until the past season, when a gentleman from Pennsylvania visited Europe expressly for the purpose, and brought home with him four out of seven swarms with which he started.

This variety of bee is said to be superior in several respects to our native bees. They do not sting. We hope soon to have the experience of friend Quimby, the Rev. Mr. Langstroth, or other distinguished apiarians in regard to the value of this foreign insect.

WANTED.—The proprietor of the VALLEY FARMER wishes to engage good and reliable men to act as Agents, in every State and County in the West and South-West. None but those who can furnish good references, such as from County or Circuit Judges, Clerks of Courts, Justices of the Peace, Post-Masters, &c., need apply. To those who can furnish the necessary references, and have the time to devote to our interests, we can offer LIBERAL INDUCEMENTS.

Address Proprietor of the VALLEY Farmer, St. Louis, Mo.

MISSOURI FRUIT GROWER'S ASSOCIATION. — This Association convened at Jefferson City on Thursday, the 29th of December. We did not expect that the society would meet till some time in January, and intended to make the announcement in this number. But a number of members met at our office, and thought it advisable to hold the meeting at this time, thinking it would be a more leisure season during the holidays, and that there would be a larger attendance. We endeavored to give as much publicity as possible, to the time of holding the meeting, by publishing the call in all the St. Louis papers, and also in many of the country papers. We also sent circulars to all the members. In our next, we shall have more to say of the meeting.

PEACH BUDS ALL KILLED.—We have visited a large number of orchards, and have heard from a great many more in different parts of the State, and from examinations thus far made, not a single live bud has been found, to our knowledge, in Missouri. We doubt whether there has ever been a period in our State, when the peach buds have been so generally killed. The early part of December was excessively warm, causing the buds to swell; and a very sudden transition to severe cold—the thermometer sinking to 16° below zero in some localities—proved destructive to the crop for the coming season.

TO OUR SUBSCRIBERS.—Do not forget our invariable rule to stop the "Farmer," when the subscription expires.

Do not forget to renew your subscription promptly and ask your neighbor to join you in a club.

Do not forget that this is the first number of the new volume and that no number will be mailed you hereafter until you renew.

Do not forget to send for any number that you have failed to receive through the mails, so as to have your volumes complete for binding.

Do not forget when writing to give the name of your Post Office, County and State.

TRAVELING AGENTS.—We wish it distinctly understood that Traveling Agents, are not permitted to compete for any of our Premiums. None but Local Agents will be entitled to them. Those who have held back, supposing they were competing with our Traveling Agents, can go to work with fair prospects of success.

THE "ATLANTIC MONTHLY," OR "HARPER'S MAGAZINE."—To any one who will send us ten subscribers to the "Valley Farmer," and ten dollars, we will send either of the above $3 00 Magazines for one year.

DISCONTINUANCES.—We hope we shall not be compelled to strike from our list the name of a single subscriber; but in compliance with an established rule of this office, this is the last number that will be sent to any subscriber who has failed to renew his subscription for 1860. Those who have not yet renewed will confer a favor by immediately remitting for 1860. Don't delay it, as if you do, you will be likely to forget it, and perhaps lose some of the numbers. NOW IS THE TIME to take pen, ink and paper, and sit down and write us enclosing the subscription price. Perhaps you can send several other names with your own. Be sure to give the name of your post-office. Address as elsewhere directed.

CROSBY & SON.—Last fall we made a short visit to the Nursery of Crosby & Son, situated near O'Fallon, Ill. The nursery was in the finest order—we never saw more thrifty trees of their age, and everything about their establishment satisfied us that it was conducted with system and care.

OFFICERS OF THE ST. LOUIS HORTICULTURAL SOCIETY, FOR 1860:—

Wm. Glasgow, Jr. President.
Emil Mallinckradt, W. C. Woodson, J. H. Tice, Vice-Presidents.
John McCurdy, Recording Secretary.
Carew Sanders, Corresponding Secretary.
Norman J. Colman, Treasurer.

The Society holds regular semi-monthly meetings at the office of the "Valley Farmer."

A poetical young lady desires us to publish the following "machine poetry," being her first effusion:

Labor of Love.

Machines for sewing! It is now confessed
For manufacturing Singer's are the best—
Tailors, Cordwainers, Saddlers, all agreed
"Go buy a Singer's if you would succeed!"
Dressmakers, Glovers, all whose art demands
The best of stitching wrought by skillful hands,
Declared at once with universal voice,
Discarding others, "Singer's is our choice!"
Proudly defying competition there.
TO PLEASE THE LADIES, next was Singer's care.
LABOR OF LOVE! When thoughts like these assail
The aspiring mind "there's no such word as fail!"
With men of genius, THOUGHT is the lightning's gleam
That wakes the slumb'rer and reveals his DREAM.
Truth, undivulg'd, like Earth obscured by night,
Grows rich in beauty with the dawning light.
Singer had but his plans to modify,
And make machines more pleasing to the eye—
More rapid, noiseless, quick "to learn to use,"
No complex part to worry and confuse—
Easy to handle, sewing thread as fine
As any cobweb, or coarse as twine;
Perfect in action—at so CHEAP a rate,
That all could purchase, whatso'er their state.
How greatly Singer triumph'd all the world has seen,
His is the only PERFECT Family Machine.

OFFICERS OF THE CLINTON COUNTY (ILLS.) AG'L. SOCIETY, FOR 1860:—

President, James Jenkins.
Vice-Presidents, Smyth Moore, Reuben Wetherford and O. A. Hervey.
Recording Secretary, Z. Case.
Corresponding Secretary, O. B. Nichols.
Treasurer, John Clabough.

You may make a note of it, that in the vicinity of Dundee, Franklin County, Mo., peaches are all killed, on both high and low localities. It was done by the suddeness of the freezing some time since.

SAM'L S. BAILEY.

CONTENTS OF NO. I.